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THE WISCONSIN
MEDICAL JOURNAL

JUNE, 1904

THE DIAGNOSIS OF PNEUMONIA IN CHILDREN.*

BY W. H. MACDONALD, M. D.,
LAKE GENEVA, WIS.

The object of this paper is to call attention to the necessity for great watchfulness during the course of the zymotic diseases of childhood, in order to detect at the earliest possible moment evidences of broncho-pneumonia; and also to point out some of the difficulties occasionally experienced in determining the diagnosis of lobar pneumonia in children.

It will not be necessary to review the classical symptoms of either disease. Broncho-pneumonia, while frequently occurring as a primary disease, is usually secondary to bronchitis and diseases in which bronchitis is a symptom, as whooping cough, measles, influenza, and other acute infections. The symptoms indicating the invasion are usually not marked, being those of an ordinary bronchitis. The child is apt to be less than 3 years of age. In a young child convalescent from or during any of these diseases, the appearance of any symptom, no matter how slight, fever, increased respiratory movement and pulse rate, indicating a retrograde movement, requires a most painstaking physical examination, although it must be admitted that, even when the disease is well developed, the physical signs are not always characteristic.

The difficulty in making a satisfactory examination of children is often very great. It is well, therefore, to make it a rule in all cases to have the patient stripped, and an effort made by the nurse to distract its attention until the chest is completely gone over. In some cases it is easy to entirely overlook sounds that are distinctly characteristic, if every part of the chest is not noted. At the rear and lower portion of the chest are most apt to be found the characteristic subcrepitant râles.

*Read at the Central Wisconsin Medical Society, Beloit, April 26, 1904.

Pepper observes that "the sounds of broncho-pneumonia are in no sense characteristic; but when to the râles of bronchitis there are superadded fine subcrepitant râles, with harsh or blowing breathing, and areas of even indistinct impairment of resonance at the postero-inferior portions of the lungs, the evidence, so far as physical examination is concerned, is fairly clear." Percussion will occasionally show points of dullness, and often it will not.

Antedating the appearance of fever and increased respiration, for a few days, there may have been constipation and green stools, calling attention to the digestive tract rather than to the respiratory.

If a cough were always present with the accession of fever, little difficulty in diagnosis would be experienced; but it not infrequently happens that little or no cough is present at the beginning of these cases.

There is one early symptom quite constantly present in acute pulmonary affections which is immediately suggestive, that is an increase in the frequency of respiration. With this will usually be found some fever. We have all observed cases in which no symptoms were present for several days, beyond increased respiration and a little fever, which then developed the characteristic symptoms. This is due to the bronchitis so often preceding the actual development. We have also seen young children convalescent from whooping cough suddenly develop a very high temperature, increased respiration, and green bowel movements, with absolutely no cough or characteristic chest sounds for several days. The occasional absence of cough is very misleading, but the increased respiratory movement is very significant.

There is a form of broncho-pneumonia occurring in new-born infants, which from its insidious onset and rapidly fatal termination is apt to leave the physician in doubt as to what ailed his patient. The child may have manifested evidences of a slight cold, when suddenly it is seized with convulsions which may be frequently repeated, accompanied by diarrhea and enteritis. This may occur without much fever or cough; but as a rule the respirations are decidedly increased and it is unusual that a trifle of cyanosis is not present.

It is well to observe, in passing, that cases of broncho-pneumonia making an unusually slow convalescence may have tuberculosis as a primary cause, affecting the bronchi or lungs, since intercurrent attacks of broncho-pneumonia are not infrequent in pulmonary tuberculosis of children.

The evening temperature of broncho-pneumonia is usually higher than the morning temperature. I recall a case, occurring a few years ago, in which there appeared considerable excitement and intestinal

disturbance, with this evening elevation of temperature, which confused a noted diagnostician for five days, owing to the absence of characteristic lung sounds: the case presenting an excellent counterfeit of typhoid fever.

To-day the early signs of pneumonia rarely need be confused with typhoid, even in the absence of distinctly objective symptoms, when it is remembered that a blood count in either form of pneumonia almost always shows a decided leucocytosis, while in typhoid there is rarely an increase, in fact there may be a diminution in the number of leucocytes early in the disease and usually before a Widal reaction could be looked for.

Both primary broncho-pneumonia and the lobar form may, owing to their sudden development, be confused with other diseases in much the same way; and they are much more apt to be confused with diseases entirely remote from the lungs, than secondary broncho-pneumonia.

Fortunately lobar pneumonia in young children is not nearly so fatal as broncho-pneumonia. Children attacked with this disease are usually, though by no means always, over 3 years of age, previously vigorous and robust in health. Some writers assure us that lobar pneumonia is almost as common in infancy as it is after the third year. In my own work I have seen very few cases of lobar pneumonia in young children.

So many cases of lobar pneumonia in children are inaugurated with pronounced abdominal pain that our attention is entirely absorbed by the distress remote from the seat of disease. Pneumonia beginning with severe abdominal pain, either localized or general, high fever, constipation, vomiting, rapid breathing, and anxious facial expression, might very easily pass for a case of appendicitis, until the development of pulmonary sounds indicate the disease in hand. These indications, unfortunately, are often late in appearing.

The importance of an early diagnosis between appendicitis and pneumonia is obvious. Let the physician invariably interrogate the lungs at every point and allow no surgical interference in these cases until he has demonstrated the lungs to be sound. Pain in the side, cough, or an expiratory grunt, no matter how infrequent, is suggestive. A leucocyte count in these cases is not helpful since it is usually high in both diseases. In adults, pneumonia in the upper lobe is rare; but in children it is of very frequent occurrence. In these cases resembling appendicitis, however, the disease is most apt to be found at the base, rather than at the apex, on the right side. The fever in pneumonia will usually be found much higher than in appendicitis, and

it is apt to remain steadily high until defervescence. Respiration is rather more rapid in pneumonia, and close inspection often discerns a slightly restricted movement on the affected side. The abdomen may be tympanitic, tender on the right side in pneumonia, and even the right rectus muscle rigid, but it has been observed by Barnard that the gentle but firm pressure of the flat hand will detect a slight relaxation of the abdominal walls between each respiration in the case of pneumonia, which is not the case in appendicitis.

The crepitant râle is most surely heard during deep inspiratory efforts and coughing, and only after the most diligent and frequent search should it be considered absent. Too much importance, however, should not be placed upon its absence, as it is often not heard in children; neither is the dullness on percussion so pronounced as in adults.

If convulsions occur at the beginning, it is pretty good evidence that the case is not appendicitis. The finding of the pneumococcus of Fränkel would point strongly toward pneumonia, but unfortunately sputum is rarely obtainable from children.

Cerebral symptoms may so predominate in a case of pneumonia at the beginning that some difficulty may be experienced in eliminating meningitis. Convulsions, vomiting, headache, general hyperesthesia, and high fever may be present in either, and some time may elapse before there are characteristic developments.

The usual respiration-pulse ratio of 1 to 4 is more apt to be maintained in meningitis than in pneumonia, where it often reaches 1 to 2. Respiration is not usually so rapid in meningitis, nor will there be present that appearance of breathlessness, expansion of the alæ and the dark red flush in one cheek. In meningitis the tache cerebralis is nearly always present, strabismus, rigidity of the neck, and Kernig's symptom are quite commonly present, and it is not likely that a cough will be present. Some assistance may be derived from an estimation of the chlorides in the urine, since in no other acute disease will the chlorides be found so low as in pneumonia.

Other diseases may somewhat closely simulate pneumonia, but probably none so important as those mentioned.

If the physician is not in constant attendance upon children with the infectious diseases of childhood, he should warn those in attendance to be alert and observant of any symptom, no matter how slight, and to report to him at once, so that the invasion of broncho-pneumonia may be met promptly. And further, before making a diagnosis of appendicitis or meningitis, the physician should give the chest and head the very best examinations of which he is capable.

DERMATITIS EXFOLIATIVA NEONATORUM.

BY ARTHUR J. PATEK, A. B., M. D.,
MILWAUKEE.

In 1878 Prof. Ritter von Rittershain published in the Central Zeitung für Kinderheilkunde, 1878, Bd. 2, under the title "Dermatitis Exfoliativa Neonatorum," a clinical sketch of a hitherto undescribed skin affection of the newborn. The opportunity for a very close study of the disease was certainly offered, for in the decade from July, 1868, to 1878, 297 cases came under Ritter's observation. Not without vigorous protest, however, was Ritter able to maintain the identity of his newly named disease, and a spirited controversy arose between him and Behrend—the latter maintaining Ritter's disease to be identical with pemphigus foliaceous. This Ritter denied in a very acrimonious article, and showed many points of dissimilarity between the two affections. Kaposi conceded the non-identity of the diseases, but denied Ritter any priority in their discovery, claiming that the condition had been previously described by various other authors. Be this as it may, the credit of making the discovery more generally known through the publication of a detailed record of a large number of cases observed during a period of ten years—belongs to Ritter, and therefore the name "Ritter's Disease" is not undeservedly coupled with the disease which he himself styled Dermatitis Exfoliativa Neonatorum.

(In Ritter's first report of the disease he called it Dermatitis Erysipelatosa, but later changed the name to Dermatitis Exfoliativa Neonatorum—this being more descriptive of its leading characteristics.)

The majority of Ritter's cases occurred during the second week of the infant's existance, some at the end of the first, and a constantly diminishing number from the second to the fifth week.

So few examples of this rare and interesting disease have been reported (I have record of about twelve or fifteen), that it will be worth while to detail its symptoms, characteristics and course, and for this purpose I can not do better than follow out the plan of Ritter's original article.

The following stages of the disease are recognized: 1. Prodromal. 2. Erythema (hyperemia) and exudation. 3. Exfoliation and exsiccation. 4. Regeneration of epidermis with desquamation. 5. Furunculosis and abscess formation.

1. *The prodromal stage* consists in a dryness of the skin and desquamation of branny scales. This stage usually follows the com-

pletion of the normal desquamation of newborn infants, though independent of it.

2. *Erythematous stage.* This varies much in degree. It usually begins in the lower half of the face and about the mouth. The redness may be faint, but usually deepens and may be followed by a generalized erythema. At the same time rhagades form at the corners of the mouth, and soon the mucous membrane of the mouth shows characteristic appearances: it is hyperemie, miliary plaques are present, and on the palate are large irregular patches of denuded epithelium covered with a grayish white exudate. The turgescence of the skin continues, and parts previously free are involved—the extremities being the last to be affected. In the meantime progress is made at the original seat of the eruption, and often the process has become advanced in the face before the trunk and extremities have become erythematous.

Stage of exfoliation. Marked changes occur in the face. The hyperæmie areas give way to a formation of crusts and frequently rhagades radiating from the corner of the mouth. While these changes are in course of development progress is made on the trunk: the epidermis becomes somewhat thickened and is raised from the cutis. Vesicles may form, separating the epidermis from the cutis, though this varies with the depth of the hyperæmia, i. e., where the skin has been profoundly hyperæmie large areas of epidermis are undermined by the serum and raised from the deeper layer even without the formation of much serum. The epidermis becomes dull in color, is wrinkled into folds and is easily torn off at the slightest contact. In places the epidermis may separate itself from the cutis without the exudation of any appreciable quantity of serum into the two layers. The almost denuded cutis is dark red and raw looking, but soon dries and becomes dull, shreds of dry and dead epidermis clinging to the denuded surface. A thin yellowish scab may develop on these areas. The process extends to other parts, the same exfoliation of epidermis following on the neck, breast, back and abdomen. Whenever the hands touch the body at all forcibly, the epidermis is loosened, wrinkles into folds, and leaves the cutis exposed or covered with a non-protecting dead outer covering. The appearance is that of an extensive superficial burn—so complete is the maceration and exfoliation. The whole body is not always involved, for with great care in handling the infant some areas may remain intact. The extremities are usually affected last, and not so severely as the trunk. The hands and feet, however, suffer profoundly, and their entire surface may be laid bare—the epidermis stripping off like a glove and leaving the

same moist raw surface as on the trunk. Various stages will now be present in different areas: beginning drying of the epidermis, a loosely lying covering, freshly denuded surfaces, and the paler red and dry areas of earliest involvement. In the epidemic observed by Ritter, the disease did not always follow the same course; at times the face was involved late in the course of the disease, and in place of being prominent in its symptoms, was only mildly affected. In other cases the initial dry scale formation and the localized or generalized hyperæmia usually so constant were insignificant or absent, though the desquamation of the epidermis of chest, shoulders, etc., went on, but with apparently less severity. In some cases thickly sown miliaria-like vesicles formed on the hyperæmic areas, in advance of the exfoliation, while in others larger vesicles developed—some oval, some ragged in outline, coalescing, leaving the cutis denuded as in the more typical cases. Occasionally an eczema-like appearance formed on the erythematous skin in advance of the separation of the epidermis.

The denuded surfaces desiccate and regenerate and in the order of their onset. The skin loses its raw, moist appearance, the deep red changes to a lighter pink, dry branny scales develop, and the regeneration of the epidermis is a rapid process, the skin having a hard, parchment-like feel. This whole process rarely lasts longer than from seven to ten days, and in some cases hardly a week elapses from the first onset of hyperæmia to the formation of normal regenerated epidermis.

As sequelæ may be mentioned: dry, branny, or more extensive eczematous conditions, furuncles, abscesses, and phlegmonous infiltrations.

The general symptoms, when complicated by pneumonia, diarrhea etc., are often very mild, the febrile and nutritional disturbances being frequently of light character.

In the differential diagnosis we must consider pemphigus foliaceous, acute pemphigus, and syphilis.

Pemphigus foliaceous is a disease of long duration, requiring months to become generalized, usually occurring in adults, and frequently is the final stage of a pemphigus vulgaris. Acute pemphigus of the newborn does not begin with an erythema, there is healthy skin between the affected areas, the vesicles are clear cut, appear either singly or in crops, are often round and are outlined by a well-defined inflammatory border, while in dermatitis neonatorum exfoliativa, even in those cases in which the erythema is absent, the exfoliating areas are rarely round, but ragged and irregular in outline and are not surrounded by a hyperæmic zone. And furthermore—in the latter the epidermis wrinkles and becomes separated from the cutis

without, in many cases, the formation of an appreciable amount of serum, much less without any vesicle or bullous formation. The latter is the chief characteristic of pemphigoid eruptions.

Syphilis runs a course so different from the disease under discussion that it need hardly receive more detailed consideration.

As to the etiological significance of this disease—its clinical history surely justifies its being considered septico-pyemic in origin. Though as great an authority as Kaposi denies this and attributes the whole course of the disease to an exaggeration of the normal desquamatory reaction of the skin of the newborn, this ground certainly seems untenable.

The clinical history seems to certainly point to the septic nature of the malady, and if we add that Ritter found the disease occurring in epidemics in his foundling asylum, the evidence is complete. There can also be no doubt of its infectious character—though Ritter has much evidence to show that contagion plays no part in its propagation. He believes the infection to be analogous to the puerperal variety.

Bacteriological evidence—a practically unborn science at the time of Ritter's studies (1872-78)—is not now wanting to testify to the infectious character of the disease. This will be considered later.

HISTORY OF A CASE OF DERMATITIS EXFOLIATIVA NEONATORUM.

Female infant, born July 6, 1900. Labor was normal, without special difficulty. Child was apparently healthy at birth and well developed and was covered with a moderate amount of vernix, and its skin was otherwise in a normal state. On the fifth day after birth a vesicle was noticed on the infant's neck. Then it was recalled that there had previously been an erythema at this spot. On the following day this had advanced to the chin, and at the same time, upon the removal of the child's shirt, a large flake of epidermis was torn away from under the right axillary region, leaving a bright red, angry, weeping surface. The further course of the disease was marked by the appearance of gradually enlarging vesicles near those first developed. From the chin development proceeded upon the face—sparing the forehead, and down over the chest, back, arms—both flexor and extensor surfaces, hands and fingers.

Upon my first visit, July 19, seven days after the first appearance of the eruption, the condition was noted as follows: face, with exception of forehead, free from epidermic covering, raw looking and moist; chest, back, arms—both flexor and extensor surfaces, hands and fingers, buttocks, genitalia, lower limbs—posteriorly more than anteriorly, are—with the exception of a few small normal skin areas between the large excoriated surfaces—entirely denuded. The left hand is much swollen, phlegmonous, and emits a very foul odor. The epidermis in some places is rolled up into thin white bands, and at other places—as on the soles of the feet and the toes—while still in place—lies loosely and in folds. The skin of the abdomen and back is almost

normal in a circular area about three inches wide, there being but one denuded surface about the size of a quarter on the abdominal surface. Large pieces of skin—representing the epidermic covering of several square inches of surface—can be easily removed. The general picture resembles closely a severe and general scalding.

July 20. The face and chest have lost their raw and moist appearance, and, while still red, are dry, and a new epidermis seems to be in process of formation. A similar condition prevails in scattered areas of the body. There are several small, scaly patches on the denuded surfaces of chest and left arm.

The mother handles the child with great gentleness, having observed that slight pressure upon any spot was at times sufficient to cause an exfoliation.

July 22. The epidermis about the soles of the feet, including toes, is loose. There is an additional denuded surface on the back about one and a half inches in diameter. A furuncle has developed on the little finger of the right hand. Disagreeable odor emanates from whole body. Temp., 103.5. Face is dry and shows a tendency to the formation of fissures.

July 23. Face and buttocks quite dry and have many shallow fissures. The epidermal covering of both hands is gone—the skin hung so loosely that the mother drew it off as one would a glove. Temp., 100.5; resp., 50. Died July 25—fourteenth day of disease.

Microscopic and bacteriologic examination. For these examinations the serum of the vesicles was taken with the observance of the usual precautions.

Several cover glass preparations of the serum, stained with fuchsin and methyl blue, were made. One specimen contains only multinucleated cells, all, with few exceptions, containing diplococci which in their grouping and morphology closely resemble gonococci. In another specimen the cellular elements are very few, but the plasma is full of individual diplococci, most of which are identical in appearance with those just described. Many of these bacteria, however, are very minute, and at first sight look like staphylococci, but closer examination proves all to be diplococci. Morphologically they are the same. There is but little grouping in the fields of this specimen, though some are found in twos, threes, or in chains or five or six.

Cultures resulted as follows:

Agar stab: Surface covered with creamy yellow growth; round colonies on surface; growth following whole length of stab in an irregular formation, with serrated, radiating margins and downy lateral outgrowths. Agar streak: Prolific growth, thick, faintly yellow, granular. Potato: Creamy, yellow, granular and thick growth. Bouillon: Turbid, and faint sediment. Blood serum: A twenty-four hour culture developed small, round, coalescent colonies, pearly surface, some white, others tinged with yellow.

Stained specimens made from the latter culture show a diplococcus, morphologically like that found in the serum preparations, but very minute, the size being that of a staphylococcus and easily taken for such at first sight. A forty-eight hour agar culture has a similar

appearance, though in each field there are a few bacteria larger than their neighbors, and in these their diplococcal character is easily distinguished.

It is evident therefore that the intra- and extra-cellular diplococcus found in the serum was reproduced in the cultures, though in its morphology as to size it had suffered some alteration.

I wish to compare with the above findings certain bacteriological data referring to Ritter's disease and to acute pemphigus of the newborn.

Riehl has found a mould with long mycelia in the vesicles of a case of Ritter's disease, and thinks this to be the causal agent.

Winternitz (*Archiv. f. Dermat. u. Syph. Bd. 43 and 44, 1898*) reports three cases, in the blood of one of which a staphylococcus was found.

Various observations have been made upon the bacteriology of acute pemphigus neonatorum. Almquist has isolated from the bullæ a readily staining micrococcus, 0.5 to 1 micron in diameter, arranged in pairs, resembling staphylococcus pyogenes aureus, and differing only by its specific pathogenic power (typical vesicles were experimentally produced).

Strelitz obtained from the vesicles a micrococcus resembling staphylococcus pyogenes aureus, and inoculation into his own arm developed pemphigus bullæ.

There has recently been reported (*British Journal Obst., Dec., 1903*) an epidemic of acute pemphigus neonatorum in which eighteen out of twenty deliveries by one midwife were infected. In the bullæ which were common to all these cases the staphylococcus pyogenes aureus was found.

Demme has isolated a non-encapsulated diplococcus, 0. 8 to 1.4 micron in diameter, usually occurring in pairs like the gonococcus. It was aerobic, grew on agar in white spherical colonies with club-shaped, rosette-like outgrowths.

It is evident from the comparison of the findings in the reported cases of Ritter's disease (including my own case) and pemphigus, that a diplococcus has been found in both diseases, the recorders remarking upon its resemblance to the gonococcus. More observers have, however, isolated a micrococcus that in two cases reproduced typical pemphigoid bullæ upon inoculation.

It is probable that there is some confusion in the diagnosis of the two diseases, because there is a similarity in the general appearance of both affections. It is, however, possible to make a correct diagnosis and ultimately more uniformity in the bacteriology of the disease will doubtless be reached.

ACTINOMYCOSIS HOMINIS. REPORT OF TWO CASES.*

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Actinomycosis is a specific infectious disease, affecting both man and the lower animals. It is caused by an organism called the streptothrix actinomycotica, or ray fungus. The lesions resemble those caused by the tubercle bacilli, and for this reason it is grouped among the infective granulomata.

GEOGRAPHICAL DISTRIBUTION: The disease has been found in about all the European countries, and somewhat over a hundred cases have been reported in America. The disease has only been definitely known for a few years, but it was undoubtedly described by many of the early writers, who mistook it for either tuberculosis or cancer, a mistake common enough at the present day.

SEX: The majority of cases occur in males, their occupation bringing them more frequently in contact with the infection.

AGE: The youngest case reported was a child of 6 years, the oldest a man of 70.

OCCUPATION: It is found most frequently in farmers, cattlemen, and stablemen.

DURATION: The disease may last from a few weeks to several years. In 66% of the cases it lasts over six months in spite of treatment.

BIOLOGY: The streptothrix actinomycotica belongs to the group of fungi. There are three component parts of the organism as found in the ray-like colony. 1. The long, thread-like form, which branches dichotomously. 2. Small, coccus-like bodies. 3. The third element consists of the club-shaped bodies, constantly found in the lesions in the ox, but frequently wanting in the human being. They are considered by some as degenerated rods, by others as spore formations.

In the tissues the organism is found as small yellowish masses or grains, varying in size from that which requires a magnifying glass to make it out to that of a pinhead. The pus is usually of a glairy, mucus-like nature and of a yellowish tint. The color of the grains is often that of sulphur, hence the name "sulphur granules.". At times

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they are pearly gray or white. Suspected pus is best examined by smearing on a glass slide, finding the sulphur granules, and crushing and staining by Mallory's method.

PATHOLOGY: The organism having found lodgment in the tissues causes first a hyaline degeneration, and then a necrosis of the surrounding cells. The process excites a proliferation of the fixed connective tissue cells about the focus of infection, and when excessive this leads to the appearance of a neoplasm. Very rarely the connective tissue is able to crush out the organism and a spontaneous cure results. Generally the growth of the streptothrix is so active that it causes a necrosis of the tissues, and if near the surface a sinus results, through which the sulphur granules and pus are discharged. Frequently there is a secondary infection by the common pyogenic organisms causing a profuse pus discharge.

Extension of the disease may be due to (1) direct extension by contiguity of tissues; (2) metastases through the blood current. The lymphatics are practically never involved except as a result of secondary infection.

ANATOMICAL DISTRIBUTION: The disease, although frequently found in the cervico-facial region, where it is known by the familiar name of "lumpy jaw," may attack almost any of the various organs of the body. Thus in the lungs it causes a broncho-pneumonia or empyema. In the intestinal tract, especially in the cecum and appendix, abscesses have formed in several cases and been opened under the impression that they were ordinary cases of appendicitis. Persistent sinuses resulted, careful search was made, and the sulphur granules were found. Abscesses of the brain, liver, and kidney are on record, and one case of spinal caries in a young man.

CLINICAL CHARACTERISTICS: These vary greatly with the region of the body affected and are naturally those of a destructive inflammation of the particular organ affected. In the cervico-facial and cutaneous, as well as in the thoracic and abdominal cases, which first show themselves in the walls of these cavities, the first symptoms noticed are pain and swelling. The pain is seldom severe and is often absent. The swelling, which may be only the size of a pea when first noticed, gradually increases in size, the tissues become red, firm, and develop a board-like resistance, while outside this area is a zone of marked edema. After a longer or shorter interval the center becomes fluctuating and there is a spontaneous discharge of the contents of the actinomycotic abscess cavity. At this stage infection by pyogenic organisms is prone to occur, and the discharge becomes more purulent

in character. The exuberant granulation tissue may choke the sinus, pus re-accumulates, and finally escapes from some newly formed sinus. The process repeats itself indefinitely, and the involved area becomes larger and larger. The temperature usually does not rise over 101° F.

The impairment of the general health varies greatly with the part affected. In some cases it is very marked. Thus the pulmonary cases often present a picture typical of phthisis—irregular fever, night sweats, chills, cough, purulent expectoration, blood-stained sputum, loss of strength, and emaciation. The cervico-facial cases are in the beginning often mistaken for tooth-ache, and teeth are extracted without relief. Trismus is often so marked as to necessitate liquid diet through a tube.

Diagnosis: A correct diagnosis can only be made by finding the characteristic ray fungus in the discharge. This is often a very difficult matter. In the old cases with secondary infection the presence of the pyogenic bacteria greatly complicates the recognition.

Prognosis: A differential diagnosis must be made between actinomycosis, sarcoma, cancer, tuberculosis, syphilis, and infective granulomata.

Modes of Infection: The disease may be contracted by (1) inhalation of straw dust in threshing; (2) through carious teeth, especially by those who have the habit of chewing straws; (3) rarely by direct inoculation from animal to man, or from man to man.

Treatment: All observers are united in the belief that only by the most thorough, painstaking, long-continued treatment—both medical and surgical—may a cure be effected. The diseased parts should, if possible, be boldly excised with knife and curette, and the surrounding tissues cauterized by a solution of zinc chloride or similar agent. The patient should be thoroughly saturated with potassium iodide. Some strongly advocate the injection of a 1% aqueous solution of the iodide directly into the infected tissues where possible.

The general health should be built up by tonics, nutritious foods, etc. It remains to be seen whether the X-ray will be of any therapeutic value in the treatment of the cutaneous forms of this disease.

The following history is fairly typical of the cervico-facial type of the disease:

Mr. D., age 53, farmer. Referred by Dr. Whitelaw of Lodi. Entered the Madison General Hospital Feb. 26, 1904. Family history negative as regards syphilis, tuberculosis, and cancer.

Previous history: Has always been a strong, healthy man, moderately alcoholic. Two years ago he was kicked by a horse, receiving

an incised wound over the right temple. This healed quickly and it does not seem possible to trace any connection between the injury and his present trouble. Ten years ago he had several cattle in his herd affected with "lumpy jaw." Fearing the possibility of contagion to the rest of the herd and to the members of his family, he had the affected animals slaughtered. Since then there has been no sign of the disease in his herd, nor in the herds of his neighbors. During the August harvest, 1903, he had an employee who was suffering from a discharging "lumpy" sore of the cervico-facial region. It was considered at the time a cancer. The case subsequently came under my care and ran identically the same clinical course as the other. Although repeated examinations of the discharge in the second case failed to clearly demonstrate the presence of the characteristic ray fungus, I have not the slightest doubt that the case was one of actinomycosis hominis. This man had several carious teeth and was in the habit of chewing straws, so that it would seem to be a clear case of actinomycosis infection through the teeth. While working for patient No. 1 he lived in the same house, ate at the same table, but was supposed to use his own towels. In the absence of other possible ways of infection, it is very probable that in the general mix-up of towels, razors, etc., during harvest time, a direct infection from man to man resulted. Although this is very rare, only one such case being on record, the evidence in this case is very suggestive. Two weeks after harvest patient No. 1 noticed a small, hard, pea-sized nodule in the right temporo-maxillary region, slightly painful and tender. He thought it was a sluggish boil and poulticed it. During the next few months it gradually but steadily increased in size, until in February, 1904, when I first saw him, he presented the following appearance:

Anemic, emaciated man, almost cachectic in appearance. Teeth are sound. Had lost thirty pounds during present illness. Heart, lungs, and abdominal viscera normal. Temp., 101°; pulse, 110. There is a large, lumpy swelling one to two inches above surrounding integument, extending from the right temporo-maxillary region to the right mid-cervical region, anteriorly to within an inch of the nose and posteriorly an inch behind the ear. The surface was in places of a dark plum colored hue. The margins and surrounding integument of an erythematous tint. The consistence varied from soft fluctuating spots to hard brawny indurations. The neighboring integument was somewhat edematous and pitted on pressure. In places the swelling was quite painful. Trismus was very marked, the patient having been unable to separate the teeth at all for some time. At first glance it appeared to be a case of malignant neoplasm, which was about to disintegrate. In view of the absence of a specific history, and lack of what might be termed the earmarks of cancer, sarcoma, or tuberculosis, together with the experience gained from the other case, a tentative diagnosis of actinomycosis hominis was made.

On Feb. 28, under chloroform anesthesia, a free incision was made from the upper to the lower limits of the swelling. Large amounts of spongy, purulent tissue, with here and there areas of dense hard tissue, were removed with knife and curette. Little pockets of pus, with

burrowing sinuses, were encountered frequently. No sulphur granules were seen at this time. It was impossible to remove the entire infected area, as it involved the sheaths of the great vessels of the neck. The surface was cauterized with 10% zinc chloride solution and packed with iodoform gauze. Large and increasing doses of potassium iodide were begun soon after the operation. The patient improved quite rapidly, and within a week was able to take solid food. The free incision had relieved adhesions and the trismus rapidly abated. About two weeks after the operation a small nodule appeared just below the lobe of the ear. As soon as it began to soften an opening was made, instead of waiting for a spontaneous rupture. It was filled with sulphur granules, in which were found great numbers of typical streptothrix actinomycotica. Prof. W. S. Miller of the University of Wisconsin prepared the specimens. From time to time during convalescence the right side of the face assumed an almost erysipelatous appearance for a day or two which rapidly subsided. At the present time the face presents an almost normal appearance, save for a little redness and induration in the scar. It would not be surprising if at any time a nodule should appear and a discharging sinus result, as the disease is very prone to recur, and two or more operations are generally necessary. He is taking at the present time 90 grs. of potass. iodide thrice daily. The general health has improved markedly; he has gained over twenty-five pounds in weight. The hemoglobin has increased from 65 to 90% under the influence of iron and arsenic. The result in both cases has been very satisfactory.*

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*The day after the meeting, patient No. 2 presented himself at the office with a small discharging sinus, near the old scar. On using the curette a few sulphur granules were secured and on examination were found to contain the mycelium and club-shaped bodies of the streptothrix actinomycotica, thus absolutely verifying the diagnosis in this case. The clinical picture in this case was identical with the one described above. The patient, male, age 54, had submitted to two thorough operations before coming under our care. The persistent return of the disease emphasizes its characteristic pertinacity. The third operation was made very extensive. A pathological fracture of the middle of the horizontal ramus of the lower maxilla was found and the bone resected for an inch on either side of it. The face at the present time, four months after operation, presents an almost normal appearance, save for the little sinus.

HYDROTHERAPY IN THE TREATMENT OF PNEUMONIA.*

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The presentation of this paper is not offered to disparage the established rules for the treatment of lobar pneumonia, but to present some measures which, if judiciously carried out, have in my experience given most satisfactory results.

Since pneumonia runs a more or less typical course, being self-limited, the treatment is one of expectancy, using vigorous remedies for the symptoms as they arise.

In order to do this intelligently we must consider the therapeutic indications present or likely to present themselves. The information sought will be found by carefully studying the etiology, the pathology, and the clinical history, including the clinical course, complications and possible terminations and sequelæ of the disease.

The etiological indications are to exercise especial care to prevent pulmonary congestion from exposure of the shoulders or chest to chill and to provide the patient with an abundance of warm pure air.

The pathological indications are first to maintain the general vital resistance; second, to maintain cardiac efficiency and to control the general blood movement and the local congestion; third, to control the heat production and elimination; fourth, control general and local metabolic processes and encourage blood formation and glandular activity; fifth, relieve pain and delirium; sixth, control clinical indications; seventh, to combat complications as they arise.

The general resistance is maintained by putting the patient to rest as completely as possible, providing him with an aseptic dietary, and tonic treatment. By aseptic dietary I mean one which will give rise to as little fermentation as possible so as not to burden the system with the elimination of ptomains.

As the patient has more or less fever, and the stomach under such conditions does not secret the normal digestive fluids, we should give the patient gruels made with water and fruit juices instead of milk, beef tea, etc., as these are not digested in the stomach under conditions we have in fever, and give rise to a state ofttimes of auto-intoxication which adds to the toxins we have to combat in the course of the disease itself.

Unfermented fruit juices of any kind palatable to the patient are indicated. Gruels of barley, rice or oatmeal water thoroughly dextrin-

*Read before the Dane County Medical Society, April 12, 1904.

ized by cooking from four to six hours may be used. In my work I have used principally orange or unfermented grape juice, barley and rice water or gluten gruel and egg albumen. This diet will supply sufficient nutriment to carry the patient past the crisis.

As the specific cause of this disease is recognized to be the pneumococcus or diplococcus of Fraenkel, we must bend our energies to inhibit the bacterial growth and to destroy and eliminate its toxines.

Water can not be employed in such a way as to act as a germicide, but by increasing the alkalinity of the blood, and especially by increasing the leucocytosis and the activity of the lymphatic glands and other organs capable of destroying bacteria, the encroachments of these enemies of life may successfully be opposed.

Metchnikoff and others have shown the importance of leucocytosis as a means of combating bacterial infection. By regulation of the local blood movement and volume, leucocytosis may be encouraged to almost any desired degree. Winternitz of Vienna, Thermes, Thayer, and many others have demonstrated the enormous influence of the general cold bath in producing leucocytosis. In one case reported by Winternitz the increase of red blood corpuscles from a cold bath which was preceded by a short hot application was 1,860,000 per c. mm., and the white corpuscles were increased 300 per cent.

I have seen experiments where the white blood count doubled after a cold treatment. Hare discovered that antipyretics diminished and that cold sponging increased leucocytosis. Cabot advises the use of cold sponging to reduce the temperature. By means of the heating compress frequently renewed or the alternate compress local leucocytosis may be encouraged to a marvelous extent and most admirable results in utilizing the natural defenses of the body secured.

The principle upon which the effects of the heating compress depends is the reaction from a primary cold application and the accumulation of heat by protecting the compress in such a manner as to prevent the escape of heat by radiation or evaporation. The degree of reaction depends on the temperature of the water used, the size of the compress and the amount of water contained in it, and the factor determining this is the age and strength of the individual and the severity of the infection. The method of applying the heating compress in pneumonia is as follows:

The compress should cover a larger surface than the infected area. If the patient is a child or old person the compress should be composed of about eight thicknesses of cheese-cloth or two thicknesses of Turkish toweling wrung quite dry out of water at a temperature from 60°-75° F., and spread evenly over the chest affected and covering

the heart. Place over this two or three thicknesses of a flannel blanket in such a manner as to exclude the air. Leave till it has become as warm as the body, when it should be renewed after rubbing the skin with the hand till it is red. In the case of vigorous adults use the water at a temperature of 50°-55° F., at intervals of from one to three hours, according to the case. Apply hot fomentations for from five to twenty minutes in order to restore the reflex activities of the skin and to stimulate the heart. The results obtained by these procedures are: first, by the cold application the cutaneous blood vessels are contracted and those of the reflex areas in the lungs are similarly affected; this drives into the blood current the leucocytes which were loitering along the vessel walls and at the same time stimulates glandular activity, which increases the formation of leucocytes; secondly, the temperature of the body is lowered to just the amount that it takes to raise the temperature of the compress to that of the body; third, in addition to lowering the temperature and causing a local leucocytosis, it stimulates the individual cells to develop the anti-toxin which neutralizes the toxins thrown off by the bacteria; fourth, it inhibits the growth of bacteria by lowering the body temperature and by increasing leucocytosis and developing an anti-toxin.

Another procedure very beneficial is a cold mitten friction or cold sponging or cold towel rub two or three times daily as may be indicated by the patient's condition. This treatment will have the best effect if given after some appropriate hot treatment in order to heighten the reaction. Those which will be the most convenient are the fomentation to the chest or back, the hot blanket pack, hot hip and leg pack or sweating pack.

The result of the hot treatment is to draw the blood to the surface and the first and transient effect of the cold following the hot treatment is to blanch the surface, but the secondary and permanent effect is to fix the blood in the skin, as is evidenced by the bright glowing surface. This brings about a lower temperature by evaporation and radiation. A general leucocytosis is encouraged, the emunctories are stimulated and toned up. In order to be able to maintain the cardiac efficiency, control the general blood movement and the local congestion, we must keep in mind the local and reflex blood supply, and also the blood supply upon which we must depend to act as reservoirs for the blood at critical periods.

The bronchial arteries that supply the blood for the nutrition of the lung are given off from the thoracic aorta and accompany the bronchial tubes, and are distributed to the bronchial glands of the larger tubes and pulmonary vessels, forming a plexus in the muscular

coat which gives off branches forming another plexus in the mucous coat of the alveoli and in some places anastomosing with those from the pulmonary artery so that some of the blood from this system passes into the pulmonary veins. Those supplying the tissues of the thoracic walls are the intercostals, eleven in number in each side which spring from the thoracic aorta.

The reflex area for the vasomotor nerves of the nutrient blood vessels of the lungs are in the endings of the anterior branches of the intercostal nerves. So that by applying a hot fomentation to the spine and back part of the thorax those blood vesels will be dilated, thus drawing off some of the blood from the pulmonary engorgement. At the same time apply a cold or heating compress to the anterior part of the chest covering the affected part and also the heart. By these synchronous applications we draw off the blood by the hot application to the back, and by the cold application to the front we get a blanched condition of the skin, caused by the stimulation of the vasoconstrictor nerves, and the same condition of the lung from reflex action. We also slow the rate of the heart's action and increase the strength of the pulsations, the end sought for in the administration of cardiac stimulants.

A very helpful adjuvant is to apply with these a hot hip and leg pack, and if the congestion in the lungs is very great and cyanosis is marked, apply fomentations to the arms. These applications dilate the blood vessels in the limbs and arms, drawing off the surplus blood from the lungs, and accomplish what the old method of blood-letting did, without losing any blood. But this method of drawing off the blood lowers arterial pressure, while the cold compress to the chest and heart slows and strengthens the heart action, so that we have an admirable treatment for the maintaining of its activity. This combination of treatments may be made every hour if necessary, but usually after the first two or three we can wait from two to four hours, gradually lengthening the periods of rest, as the severity of the manifestations disappear.

Encourage the patient to drink as much water as possible either pure or with some fruit juice in it to add flavor and to stimulate the emunctories. If it is impossible to get the patient to drink much, or if it is not advisable to encourage him to do so, it is well to give a copious enema, to be retained, of a hot normal saline solution.

The value of this procedure can hardly be overestimated. The direct effect of the heat within the bowels over the kidneys is to stimulate them as well as all the vital functions; the secondary effect is to dilute the blood and thus facilitate the elimination of toxins. This

procedure impresses me as preferable to hypodermoclysis, which attains the same results and which is highly recommended by F. P. Henry (*Medical Chronicle, February, 1904*). One hydrotherapeutic measure which I would oppose is that of the general cold bath or application, as it tends to chill the patient and often results harmfully.

Dr. Folsom reports excellent results from hydrotherapeutic means in his practice in the Boston City Hospital; also Dr. Klein of France reports excellent results by the same measures.

Dr. W. P. Northrup (*Medical News,* Nov. 19, 1898) states that: "It is wrong to have a hot poultice placed continuously on the chest, but to keep the extremities warm, relieve the nervous symptoms and the local congestion by means of the cold chest pack." When the temperature rises above 102° F. is ought to be relieved by first applying a hot fomentation to the chest and abdomen, to be followed by a cold mitten friction or sponge bath, using care not to chill the patient. The best way to avoid this, I have found, is to treat but a portion of the body at a time. The following technic has given the best results: Keep the body well covered all the time, removing the fomentations or other hot treatment under cover so as not to expose the patient to chill by evaporation. Then take one arm and give the friction or sponge for from one to four minutes, using enough force to stimulate a reaction, till the part is glowing. Then cover that arm and take the other, treating it the same way, next the limbs in the same manner, and lastly the abdomen and chest. Follow this treatment with the heating compress wrung out of water, from 50° to 75° F., according to the case, placed upon the chest, leaving it on till it has become as warm as the body, when it should be removed, and after the skin has been made red by rubbing, renew the application.

If the patient chills easily the same result may be obtained by giving a short, very hot sponge. I have many times seen the temperature lowered a degree in less than ten minutes by either treatment. The principle to keep in mind is to control heat production and to keep up heat elimination by retaining the blood in the skin.

The local and general metabolic processes are controlled by the amount of fresh blood we can bring to bear in the infected area and the regulation of heat production and elimination.

Pain is to be relieved by the application of heat to the affected part for five to fifteen minutes every two or three hours, with the heating compress between these applications.

Delirium is to be controlled by placing an ice cap or bags to the head and back of the neck (using care not to chill the upper part of the chest and the shoulders), together with a hot hip and leg pack.

Follow this treatment with the cold mitten friction or cold sponging. The delirium usually subsides when the bowels and kidneys eliminate properly and the skin begins to perspire.

The clinical indications which demand special attention are: *First*, cough. This is ameliorated and controlled to a great extent by fomentations to the chest for from five to fifteen minutes, making the applications from one to three hours with a heating compress, in the intervals changing it when it becomes as warm as the body when the cough is severe, and when it is less severe to leave the compress on for about ten to fifteen minutes after it has become warm. The inhalation of steam for a period of from five to fifteen minutes three or four times a day, and the keeping of fresh lime slacking in a pan of water in the room is also beneficial. When inclined to cough continuously have the patient sip a glass of very hot water. Use great care to protect the neck and shoulders from chilling from contact with wet bed clothing. Keep the shoulders covered and warm and dry. *Second*, pain in the chest, which can be relieved by the same treatment as for the cough. *Third*, constipation. For constipation administer the daily enema or coloclyster. *Fourth*, relieve weak heart and feeble pulse by the cold compress or ice bag to the heart for fifteen minutes every two hours while giving the hot hip and leg pack or while applying fomentations to the abdomen, to be followed by cold mitten friction. When in danger of collapse, use alternating hot and cold applications over the heart for five to fifteen minutes every hour or when indicated. *Fifth*, gastro-enteritis is to be relieved by the fomentation to the stomach and bowels or a hot trunk pack every three hours with a cold compress during the intervals, to be changed every twenty to forty minutes. *Sixth*, cyanosis is relieved by using the hot hip and leg pack, at the same time applying the ice bag to the heart for fifteen minutes, to be followed by the cold mitten friction. *Seventh*, headache and delirium are to be relieved by using the ice bag to the head with the hot hip and leg pack. *Eighth*, hyperpyrexia is to be relieved by a cool enema, cold mitten friction or towel rub or cool sponge, or if there is a tendency to chill, by a very hot sponge. *Ninth*, pain is to be relieved by hot applications to the parts affected.

Contra-indications are the Brand bath and the cold immersion bath, as the tendency is to cause internal congestion and also chill unless it is given just right, which is impossible without the aid of two or three trained assistants.

The general method to be followed is to maintain warmth and activity of the skin, taking care not to chill the shoulders and neck. Combat the pulmonary congestion by direct and derivative treatments

as above directed, regulate the temperature by carefully directed hydriatic measures, promote vital resistance by frequently repeated cold frictions and rubs, thus sustaining the vital powers till the tissues have developed the anti-toxins and the natural processes have overcome the disease.

Report of Cases.

The following cases were mostly treated in Mexico on the high plateau of Guadalajara, where pneumonia is an especially fatal disease —from 60 to 80 per cent. of the cases terminating fatally:

Case 1. Frenchman, merchant, 22 years old. Lobar pneumonia of right side, involving the entire lower lobe and part of the upper lobe; on the fourth day of the disease was brought by his doctor to the Sanitarium. Cyanotic, pulse 160 and weak, respiration 55, temperature 105.4°. Treatment: Cold compress to heart and lung, hot normal saline enema, hot hip and leg pack, fomentations to the arms, cold mitten friction. Temperature came down two degrees in thirty minutes, respiration to 35, and pulse 120 per minute. This treatment was followed by the heating compress, changed as directed above: treatment repeated every hour and a half during the first twenty-four hours, then gradually lengthening the intervals. Recovery.

Case 2. Spanish woman, 52 years old, double pneumonia. When the case was turned over to me, the whole back was one great blister from the cansties applied by the Mexican physician, who had given the case up to die. I dressed the blisters antiseptically, using the same treatment as above, varied to suit the case. Recovery.

Case 3. Baby, 18 months old. Same treatment as above except the hot treatments were not so hot and the cold compresses were put on at a temperature of 85, instead of 50 or 55°. Recovery.

Case 4. Mexican 75 years old, very feeble and with a severe attack. Used the same treatment as above, but observing the rule to make the treatments only vigorous enough to excite the reaction. The cold treatments from 75 to 80°. Recovery.

Case 5. Young woman, 25 years old, puerperal pneumonia. Called fourth day of attack, finding the whole left side covered with blisters. Being a woman of society, she had been used to drinking a great deal of high wines. She was very low and we could not get any reaction. Case died the third day.

Case 6. Laboring man, 35 years old, double pneumonia. Called the first day. Gave the treatment as in the first case. Recovery.

Case 7. Young man, 25 years old, double pneumonia, back and chest blistered terribly when I was called. Treated the blisters antiseptically and gave vigorous treatment. The pulse was 165, respiration 55, and temperature 106°, patient cyanotic. Temperature fell three degrees the first six hours, cyanosis disappeared, pulse fell to 130, and respiration to 30 per minute. Recovery.

Case 8. Thirty-five years old. Whole of left side involved, heart much overworked and very weak. Same treatment. Recovery.

Case 9. Captain in Mexican army. Double pneumonia, much distressed, but reacted well. Treatment as above. Recovery.

Case 10. Woman 40 years old. Right lower lobe involved. Was called the first day of attack. Responded quickly to treatment. Recovery.

Case 11. Old man, 75 years old and very weak. Right side involved. The treatment had to be modified to meet the requirements of his age and vigor. Recovery.

Case 12. Man addicted to the use of intoxicating liquors, very low and delirious. Temperature did not register above 101°, but his condition was grave. However, he responded to treatment and recovered after protracted illness of twelve days.

Case 13. Child two years old. A weakly, bottle-fed child. Responded but feebly to treatment, but recovered after a long and slow convalescence.

Case 14. Man, 37. Pneumonia following operation for hernia. Treatment modified to meet his condition. Recovery.

Case 15. Woman 45 years old. Double pneumonia. Could only keep the heating compress on the chest and the feet warm. Recovery.

Case 16. A woman 30 years old who had been a semi-invalid for a number of years. Reacted slowly to treatment, but recovered after a hard fight.

Case 17. Man 52 years old and asthmatic. Left lower lobe involved. Treated as above. Recovery.

Case 18. Child five years old and in a very poor district, had been poorly nourished and was not a robust child. The treatment was regulated to the needs of the patient. Recovery.

Case 19. Man 38 years old, double pneumonia. Delirious with temperature at 106°. When called, feeble pulse and rapid respiration. Continuous treatment for two hours before the temperature began to come down. Then was gotten under control and proceeded to an uninterrupted recovery.

Case 20. Old man, 72 years old. Very nervous and with the right lower lobe involved. Responded quickly to treatment and proceeded to an uninterrupted recovery.

Case 21. Young man, 23 years old. Whole right side involved. Was given the treatment as described above. Recovery.

Case 22. Child, 8 years old. Whole right side involved. Treated as above. Recovery.

Case 23. Saloonkeeper's wife. Had been in the habit of using both alcohol and morphine. Was very low when called. The left lower lobe involved. Responded but slowly to treatment. Recovery.

Case 24. Young man, 22 years old. Very delirious at the first. Gave morphine and atropine to quiet him, then followed with the treatment described above. Recovery.

Case 25. Old man, 65 years old. Left side involved. Responded to the treatment quickly. Recovered without a mishap.

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EDITORIAL COMMENT.

THE ANNUAL CONVENTION.

The first grand test of the State Society's strength will be demonstrated in a few days. For several years the progressive physicians of Wisconsin have been gathering ammunition to carry out the policy inaugurated by the national organization, and although this society may have lost some of its identity in its amalgamation with the higher body, in becoming an integral part of the national body it has gained far more than it has lost. The state organization is represented in the national organization and has equal rights with other states; by virtue of the reorganization idea the membership of our own society has in

one year been almost doubled; sixty-one counties have organized themselves into medical societies for mutual advancement, and the Medical Society of Wisconsin will henceforth be a society representative of the entire profession of this state, and its deliberations will be governed by men whose selection is dictated on geographical lines.

Many other features mutually advantageous will be gradually evolved, and, foremost of all, the strength of united labor and common interests will be demonstrated.

The change in the method of publishing the proceedings of the annual meetings, as inaugurated last year, has, we believe, been successful and satisfactory. The JOURNAL has won many friends during its brief existence, and in parcelling out the transactions in a readable manner, has undertaken to more than fulfill its obligations towards the Society. Whether this has been done to the satisfaction of all, remains with the Society, and upon its action rests the verdict.

Great enthusiasm will doubtless prevail at the coming annual meeting. The program promises a rare treat. The entertainment committee has worked hard and faithfully to care for the members at their sessions and to offer diversion, and the weather man's spirit of unrest will surely be propitiated by that time. Thus, every possible contingency has been satisfactorily met, and a good turnout only is needed to demonstrate that this reorganization matter is not all talk; that the county society formation has assumed due prominence in the eyes of the members; that the latter and especially the new members are willing to demonstrate their loyalty by an annual pilgrimage to this convention city, and that the federation of the county, the state and the national societies is not a myth, but a fact.

Therefore, on June 22, 23 and 24, we command you to lay all other business aside, to attend this, the first meeting under the new plan, and to help to a successful issue a much deserving project.

Once more, COME, and come on time, because the President's address is to be the opening feature of the first day's session.

RETROSPECTIVE.

The State Medical Society of Wisconsin is rich in its traditions of over fifty years. In that half century many men, illustrious for their learning, or their skill, or their charity, have passed from life and, in some cases, almost from memory. What has the Society in tangible form today that shall perpetuate the memory of these men or their deeds? Nothing. Not a picture. Not a line they have written except as it occurs in the old *Transactions*. The obituary

notices of many of them are inadequate pictures of their lives and work. There are living members who have been physicians from nearly the beginning of the Society. Is it not time an effort were made to learn from these members the history of their lives, and anecdotes of the lives of many who have long since gone? A concerted effort would bring together a wealth of material that will be valuable in the future. Why should we not have a picture gallery, or an album, in which shall be preserved the faces of our past and present members, together with biographic notes of them? These would have an increasing value as time goes on. It would be worth the effort. If we delay too long much of value will be lost.

For years the anniversary chairman has read the Roll of Honor—the names of all deceased members, at the annual banquet, the audience standing. Since the reorganization no provision has been made for this commemoration of those who are gone. May we not stay the rush of our daily lives long enough to say a word of tribute to the silent ones? Is it not a pleasant thought that we, too, shall be remembered? Let us indulge our better emotions a little, and toss a flower on our brother's grave. It will do us no harm. Paying honor to the dead is of great antiquity. We can bury our differences at the bier. Let us devote one hour a year to some form of commemoration of the dead. Let us have every name pronounced. Let us have anecdotes, and eulogies, and preserve them in a large book for the purpose. Let us gather pictures and provide for their care. We can spare the time. It will have an ethical value to us all. It will be an inspiration to the young, and a satisfaction to all.

OPPORTUNITIES FOR THE RECENT GRADUATE.

At a time of the year in which the medical colleges of the country are holding their annual commencements and are turning out their thousands of graduates, a series of articles like that published in the *Medical Record* of May 28th, seems quite timely and apropos.

There is perennial complaint that the medical profession is becoming more and more overcrowded; that the difficulties to be faced by the succeeding classes of medical graduates are annually greater, and that something radical must be done in order to limit the output of practitioners of medicine.

These articles in the *Medical Record* discuss the various opportunities open to physicians outside of private practice for earning a livelihood or supplementing the income derived from family practice:

army and navy service; marine hospital service; railway surgery; life insurance examining; health office and laboratory service; merchant marine service; police and fire department service; quarantine and immigation service, and finally services as "lodge doctor."

It seems, and always has seemed, to the writer that the pessimistic view that the profession is overcrowded to the last limit, and that penury, want, and even starvation, stare the whole body of medical men in the face because of the continued output of the medical schools, is entirely unwarranted.

The real fact is, that in all times from Hippocrates to the year of our Lord 1904, there have been on an average as many men and women practicing medicine as could maintain themselves in that vocation.

There is a great law of Nature, to which there is no exception, governing the growth of population: that the procreative instinct is so strong in man that, whenever there is a probability of his being able to support a family he will have one. This law has been in operation from before the days of the Preaustralian to the present time. As a result of this general law all ranks and grades of society, from the highest to the lowest, are filled to their utmost present limit at all times. The ranks of every trade, profession, and occupation are always filled. For every office, however mean, there are scores of applicants.

In the legal and medical professions the average income is no greater than that of a good accountant; the average pay of the accountant class is no greater than that of a good salesman; and so on down the scale until we reach the unskilled laborer, where the remuneration is, always has been and always will be, barely enough to supply the simplest wants of the animal body. To be sure, in a rapidly growing country or community all classes will fare better, for a time, than in old, well-developed places.

Men and women will enter the medical profession in the future as in the past who will fail to succeed. It is thus in every occupation. It is thus in every generation. It is thus in every country.

Let us rid ourselves of the delusion that there was a golden age; that things were better in the days of our fathers (more or less remote); that the skies are bluer in Italy than elsewhere; that there were "good old times"; that our profession is the most undesirable, most abused, most traduced, most uncomfortable and thankless avocation in the world.

These delusions are the outgrowth of an exaggerated respect for the past and that which is remote either in time or space, and which

belittles him who has learned in Milwaukee that two and two make four, while it exalts him who has learned in Vienna that zwei und zwei machen vier.

It is far more satisfactory to view the facts of history through unstained glass and see them as they really are. We are thus enabled to take a more sanguine and optimistic view and recognize the fact that at no time in the history of the human race have there been greater opportunities for young medical men and women than the present, and this has reference not only to opportunities for doing good to one's fellow man, but also for reaping financial rewards and honors.

The young person, man or woman, who enters upon the practice of medicine will have to prove that he or she is worthy of success. Some will fall by the wayside and enter other avocations for which they are better qualified, thus, like water, seeking their level. Some will just succeed in maintaining themselves in the professional class. Some will occupy a middle state, neither very skilled nor very unskilled, but "slumbering on in a sort of peaceful and decent mediocrity," adopting the prevailing opinions and practices of the day and rearing a family in respectability, decency and comfort. Some will, by superior ability, education, energy and perseverance, achieve distinction, wealth, influence and will hand their names down to posterity as benefactors of mankind.

THE CORONER'S OFFICE.

The Coroner must go. This has been the decision in some eastern states, and there appears to be good reason for changing a plan which may have been best when first it was contrived; but the present method is far from satisfactory. "Crowner's Quest Law" was made the subject of ridicule by Shakespeare, and there have been many ridiculous, and some scandalous proceedings growing out of coroners' inquests in this country and abroad. The reason for this is apparent. Political "pull" usually determines the selection of a coroner: some man has rendered party service; he wants the office as a stepping stone to other political preferment—and the fees to be had. If he is a "good fellow," that is—a "political worker"—the nomination is made often without a question about fitness for the many delicate duties and responsibilities connected with the office. The coroner is often required to investigate matters of the utmost delicacy, not alone in relation to legal questions, but also into the private affairs of family

life; the nature of disease, heredity, and every circumstance which may in any manner aid the inquiry. Nearly all medical practitioners have had opportunity to observe how indifferently, even carelessly and thoughtlessly coroner's investigations are sometimes made. This is not always the fault of the coroner, but it is the fault of the method. The time has come when a change for the better should be made. The work now performed by the coroner ought to be done by the Health Department, where it properly belongs. In this department there are skilled physicians who are competent to conduct any investigation required without obtaining outside assistance.

The coroner is now obliged to employ a physician to conduct post-mortem or other examinations, and the selection is left to him. The examinations have doubtless at times been inefficient, and criminals may have escaped punishment for crimes committed, because the post-mortem or other examination was imperfectly or carelessly conducted.

In the Health Department there is a corps of trained physicians who have been examined as to their qualifications for the positions they hold, and they are always on duty. Their daily experience fits them for the work now required of the coroner, and they are by their professional education and experience better qualified to do such work than any layman. In Massachusetts, New York and New Jersey, laws have been passed transferring the duties of the coroner to Boards of Health. In New York the matter was considered of sufficient importance by Governor Odell, to be made the subject of a special message by him to the legislature, and the proposed bill at once became a law. A bill was drafted by the Council of New York City in accordance with the provisions of this law, and was passed by that body.

Unfortunately for reasons not sufficiently clear, this measure was vetoed by Mayor McClellan. However, the state law empowering the city council to draft such an ordinance is still standing, and some day—when the present deterring factors are not operative—it will go into effect.

The testimony of skilled physicians who have made accurate examinations to determine the cause of death should be transmitted directly to the district attorney: such evidence—unlike much obtained through the agency of the coroner—will have value in court, and the method proposed will do away with the cumbersome roundabout ways of the "Crowner's Quest Law."

Gentlemen of the medical profession, think about this matter, and then make the effort to place this office where it properly belongs —with the Health Department.

SUBSTITUTION LEGALIZED.

A most flagrant abuse of judicial authority comes to us in a communication made to the *Medical News* by a Brooklyn physician.

Briefly, the case is as follows: A druggist substitutes for the medicine called for by prescription something else which in his opinon is "just as good." Severe and dangerous symptoms follow. In a civil suit brought against the druggist the latter does not deny the substitution, but goes on record as declaring it his opinion that one-fourth grain of morphine per hour "*might* up-set a patient."

The learned judge evidently argues that inasmuch as the patient was not killed by the substitution fraud practised, there was no just ground for suit, and dismisses the action, with the sage summing up:

"The evidence in this case is, at the most, that the amount of morphine in this drug, as put up by the pharmacist, was light, one-tenth of a grain to a teaspoonful. There is no evidence here that an excessive dose of morphine was put up. I dismiss the complaint. That it had an unusual effect on this woman is not enough."

If fraud of this character is legalized, wherein lies the physician's protection? Where the patient's safety? This sweeping decision of Justice Gaynor's will have a decided ill effect upon all New York druggists and they are bound to suffer the consequences of such action; the guilty druggist should suffer a boycott, but the tendency on the physician's part will be greater than ever to dispense his own medicines.

FALLACIOUS LOGIC.

Our attention is called to the fact that a thorough understanding of the subject of etiology is not always shown in some of the articles of our best writers in medicine. Perhaps the study of no branch of medicine enables a physician to so study the course of a disease and think out for himself the reason for each symptom as does general etiology.

An excellent article, the perusal of which has brought the subject to mind, is that of Dr. John Lovett Morse in the *Archives of Pediatrics* for May, 1904. The title of the article is "Tonsilitis a Cause of Acute Nephritis," and exemplifies the fallacious reasoning of considering one result of an infection a cause of another result—probably because the first antedated the second; as a matter of fact, both are but associated symptoms of the same infection.

In this article Dr. Morse cites the history of four cases of acute nephritis which followed attacks of tonsilitis. He excludes the possibility of a scarlet fever etiology and maintains that the simple tonsilitis caused the nephritis in each case.

We take exception to such a ruling. Tonsilitis may be the *result* of the infection of many different microbes, among which is the one causing scarlet fever, and tonsilitis, it is well known, is a frequent symptom of scarlet fever.

The nephritis is an evidence of the inflammatory reaction set up in the kidneys, caused by the elimination of the toxins of the same infection which in one case may have been the specific element causing scarlet fever, and in another a non-specific producing merely the tonsilitis.

In his article Dr. Morse speaks of other authors who call attention to the importance of tonsilitis in the etiology of acute endocarditis. In considering tonsilitis a cause of endocarditis they are guilty of the same error. The tonsils are the port of entry of the infection, and the tonsilitis is therefore but the initial symptom of the disease, and not its cause.

OF HISTORICAL INTEREST.

The rediscovery of an old document forms an interesting chapter in the history of typhoid fever. Prior to the study of Louis and Gerhard the disease now known under the name typhoid had not enjoyed any individual identity and was known only as a symptom-complex of what was grouped under the generic term of "continued fever."

To Dr. Osler belongs the credit of calling attention to the hitherto unpublished manuscript of the late Dr. Alfred Stillé. The medical world owes Stillé a debt for his large share in the differentiation of typhoid from typhus fever. The paper referred to was read at the Société Medical d'Observation of Paris, in 1838; it was written in French and had never been translated or published.

The article is divided into four chapters: the pathological anatomy; the symptoms; the causes; the treatment. Comparative tables of the two diseases, typhoid and typhus, bring out in detail all that close observation and the knowledge of the day could master.

This paper is of great historical value and is now published for the first time in the *University of Pennsylvania Bulletin*, April, 1904. It will not permit of abstraction, but is well worth perusal by everyone interested in medical progress.

OYSTERS AND TYPHOID FEVER INFECTION.

Several months ago we called attention in these columns to the infection-bearing power of the oyster, with special reference to typhoid fever.

Inasmuch as this is not yet a generally accepted doctrine and it may require an oft-repeated lesson to bring the danger home to oyster consumers, it is pertinent to refer again to the agitation this investigation is now occasioning the Department of Health of New York City.

This city's water and milk supply are considered good, almost beyond reproach at present, and infected oysters and vegetables are looked upon as the probable source of much of the typhoid contagion now existing. Bearing this in mind the New York City Department of Health has ordered an inspection of the course of its oyster supply, and has begun investigations with a view to determine the transmissibility of typhoid by means of the infected bivalve. It has been demonstrated that the oyster can carry the typhoid bacilli alive for nine days, and further experiments have shown that many oysters die in transit to the market, and the dead or dying oysters, being a good culture medium—the increase of the bacilli is thereby favored.

We are interested to learn the further results of these investigations.

ANOTHER SOURCE OF INFECTION.

The dissemination of infection from the feces discharged from the closets of railroad coaches is now engaging the attention of hygienists. The following paragraph quoted in the *Medical Record* of May 28th, is taken from the paper of M. J. Rosenau, Director of the Laboratory of Hygiene in Washington:

"There is little doubt in my mind that typhoid fever is spread broadcast throughout the length and breadth of the land by means of the primitive and offensive open hopper. There are many patients with typhoid fever traveling in railroad trains. Some are walking cases, some are convalescent, some have the disease developing. From the nature of the disease, these patients use the closet frequently, and their discharges, laden with typhoid bacilli, are dropped along the route and smear the under side of the car, to be splashed and spattered in all directions. Some of these discharges may directly contaminate the water supply of towns and cities by falling into the river as the

train crosses the bridge; some may do so indirectly by being washed into the water-courses along which the railroad so frequently runs, others in the country become the breeding and feeding places for flies, which carry the infection to the nearest farm house."

Attention has been repeatedly called to this danger, and as long ago as 1892, when an epidemic of cholera asiatica was apprehended, A. L. Benedict, of Buffalo, wrote: "As railroads are the principal carriers of infection to inland towns, and as the main exit of the cholera spirillum is through the intestine, the closets in passenger cars should be kept locked inside the city limits. In fact it would be better * * to have a metal bucket fitted to the ordinary open cylinder of the car closet. A disinfectant should be kept in the bucket, which could be changed at certain stations and the disinfection completed."

The importance of this matter cannot be overestimated and we trust the agitation recently begun will result in the accomplishment of some much needed reforms in the general character and conveniences of railroad coaches.

NEWS ITEMS.

A Just Rebuke.—The New York Supreme Court has sustained the suit of the M. J. Breitenbach Co. (importers of Gude's "Pepto-Mangan") in an action against the Siegel-Cooper Co. and Thomas H. McInnerney for infringement on property rights in their use of the name "Pepto-Manganate."

By this decision the Siegel Cooper Co. and Thomas H. McInnerney "are forever enjoined and restrained from making use of the words 'Pepto-Manganate,' in any manner whatsoever, either alone or in combination with other words, or from using the words 'Pepto-Mangan,' or any word or words similar to the words 'Pepto-Mangan' in sound or appearance, in connection with the advertisement or sale or otherwise, of any medical or other preparation—excepting only that of the plaintiff."

Faculty Reorganization.—A plan for the reorganization of the faculty of the University of Pennsylvania has just been approved by the Board of Trustees whereby the faculty membership has been extended to the clinical, associated, and assistant professors, to the associates and lecturers, and to limited representation from the subordinate staff. The scheme provides for an executive body or council, to be composed of the heads of the departments in the fundamental subjects and two representatives of the specialties. The plan will be put into effect Sept. 1, 1904. A similar plan has been adopted by the Jefferson Medical College and all clinical professors have been elected to full professorships.

The Wisconsin College of Physicians and Surgeons, Milwaukee, on May 28th graduated a class of twenty-nine from the medical department, and fourteen from the dental department. The exercises were held in the Pabst theater

and the Doctorate address was delivered by Dr. A. J. Burgess. Following the exercises a banquet was served at the Plankinton House. Dr. Herman Reinecking acted as toast-master and the principal after-dinner speech was made by Superintendent of Public Instruction, Mr. Carroll G. Pearse. This is the largest class that the College of Physicians and Surgeons has yet graduated.

Illinois Colony for Consumptives.— According to press dispatches, a tent colony for consumptives will be established at Ottawa, Ill., under the patronage of the Illinois State Medical Society. The site, containing 25 or 30 acres on a bluff overlooking Illinois river, has been donated to the use of the colony. It is the purpose to demonstrate that tuberculosis can be cured in this climate, when not too far advanced, by fresh air and good food. The cost to patients will be the actual expense of the food, estimated to be from $16 to $18 a month.

Dr. J. C. Noyes, of Oshkosh, died on June 7th, at the age of 63, after an operation for a malignant growth of the femur. Dr. Noyes was for many years a prominent physician of Oshkosh, having established himself in practice there at the close of the Civil War. He joined the State Medical Society of Wisconsin in 1898.

Dr. Charles A. Oliver, of Philadelphia, Pa., has been chosen by the British Medical Association as its official guest from the United States for its seventy-second annual meeting, which is to take place in Oxford, England, in July. With him are associated Prof. Hirschberg of Berlin, representing Germany, and Dr. Javal of Paris, representing France.

Dr. Rupert Blue of the United States Marine Hospital service, formerly stationed at Milwaukee, has been elected president of the Public Health Commission of California, a new organization comprising the federal, state, and local health authorities in San Francisco.

Dr. J. R. Jackson of Berlin moved recently to Rudolph, Wis. He had been in practice in Berlin nearly three years.

CORRESPONDENCE.

BALTIMORE LETTER.

During April the Johns Hopkins Hospital Society held one meeting. Dr. Osler spoke on the "*Surgical Importance of Visceral Crises in the Erythema Group.*" He gave a brief sketch of the various conditions associated with colic and then took up the discussion of a group of cases in which severe attacks of colic are associated with various skin lesions. These cases he divided into the following groups.

1. Cases of colic associated with a pure angioneurotic edema.
2. Cases of colic associated with a simple urticaria.
3. Cases of colic associated with purpura alone, or arthritic purpura. This group is commonly known as Henoch's purpura.

4. Cases of colic associated with only a fugitive erythema.
5. Cases in which the colic is the only manifestation.

Dr. Osler considers all these five groups of cases as one disease entity and that the skin lesions found are a secondary feature. He thinks that it is probably a toxemia of some kind. Many of the cases are associated with albuminuria and casts. The condition is of surgical importance from the fact that the abdomen has been repeatedly opened in the expectation of finding some grave lesion. In one case cited by Dr. Osler the abdomen had been opened after a positive diagnosis of gall stones had been made. Nothing was found, and the patient is still subject to recurring attacks of colic. During one attack the colic was associated with swollen tender knees and albuminuria; in another there was epistaxis and a purpuric spot on the right flank during the colic, but no arthritis or albuminuria.

The rest of the meeting was taken up by a report of some work by Drs. Knox and Marshall on "Immunization of Dysentery Bacilli with Agglutinating Serum."

On May 2nd the meeting of the Johns Hopkins Hospital Medical Society was opened by Dr. Cushing, who exhibited a case of *hydrocephalus* in a colored child 8 months of age. The enlargement of the head had been noticed by the parents for three or four months. The enlargement was not excessive, but the child showed the characteristic dullness of cases of hydrocephalus. Dr. Cushing discussed the treatment of such cases. He does a lumbar puncture before operating. If a large amount of fluid is obtained and the tension in the skull is reduced he considers operation, but where only the spinal fluid is obtained by the puncture the operation as it is performed by Dr. Cushing is of no avail. He goes through the abdominal cavity and trephines the body of one of the lumber vertebræ and leaves a silver canula in the opening thus establishing a route by which the fluid may drain into the peritoneal cavity. The main danger in this operation is from intestinal complications. The patient shown at the meeting was subsequently operated upon and died a week later of intestinal obstruction.

Dr. Alexander Lambert of New York read a paper on the *Treatment of Delirium Tremens and Chronic Alcoholism.* He is a firm believer in the efficacy of ergot in these cases and according to his statistics he has obtained some very remarkable results.

At the meeting held May 16th Dr. Thompson read a paper on the *Blood in Pregnancy.* Dr. Halstead followed with a report of a case of bone cyst which he has recently operated upon. The greater part of the shaft of the bone was removed and the periosteum left to form a new shaft—after the method suggested recently by Dr. Nichols of Boston in cases of osteomyelitis. Dr. Bloodgood reported an early case of cancer of the stomach with successful removal. The last paper on the program was by Dr. Stiles of Washington on a case of *Pulmonary Distomiasis*—the first on record in the United States.

(R. G. W.)

CLINICAL REPORTS.

OBSTETRICS, WITH A REPORT OF A CASE OF ADHERENT PLACENTA.

By C. H. Marquardt, M.D., La Crosse.

I have found it rather difficult to select a subject that promised to interest you sufficiently.

The advance made in medicine during the last quarter of a century has come to us through men specially qualified by training in particular lines of work, equipped with endowed laboratories, instruments of precision, and abundant material. Research has placed medicine of the present day nearer than ever to an exact science, and the reading of papers on interesting cases hardly satisfies as well as in the years gone by.

The small medical society of to-day can not do better than occupy its time with a discussion of subjects that are of general importance and interest in its own community. For this reason I will occupy your attention with some remarks on the practice of obstetrics as we find it here.

It is unquestionably true that a large majority of lying-in women of La Crosse are attended by incompetent midwives, and it is befitting that as physicians we should make an effort to change this practice. Asepsis and anti-sepsis find their application in obstetrics quite as much as in general surgery, but it seems that the obstetrical field is here occupied by midwives who have no knowledge of surgical cleanliness.

It is a strange fact that in the country surrounding our city midwives are not employed, and that physicians are accorded the position which rightly belongs to them.

Only this last month I heard of a young mother who had given birth to twin babies in the afternoon with no physician present, and who died by midnight from hemorrhage due to retained placenta. Some one is surely responsible for this state of things, but, occurring in a city, this is soon forgotten, whereas if it had taken place in the country, the house, the home, the farm, would for a long time be remembered by so sad an occurrence. On several occasions in years past have we had case after case of infection or so-called puerperal fever following the rounds of certain midwives without the least protest from any one to improve matters. It seems to me that this society is the proper source from which the public should be enlightened and educated to a realization of the importance of having proper care given to a lying-in woman, such as she is justly entitled to as a benefactor to her race every time she brings forth an American citizen.

And now to turn your attention more directly to a particular period in the management of labor, to-wit, the last and third stage, the following, I trust, will be of interest, as it concerns what may properly be called a complication.

On the evening of the 8th of February, at about 6 o'clock, I was called to a young woman, a primipara, who had been delivered apparently in a normal way of a child at 2 o'clock the same afternoon. All

*Read before the La Crosse County Medical Society, April 7, 1904.

had gone well except that the uterus had failed to expel the placenta. The attending midwife, in attempting to assist in completing the expulsion of the placenta or bringing about its delivery, had made traction upon the funis until she had accomplished a separation close at the placental attachment. The young mother was feeling very comfortable upon my arrival; she had not had any after-pains, was not flowing, and all that she was concerned about was getting rid of the placenta. Putting my hand upon the abdomen, I could distinctly feel a well contracted uterus of the usual size before placental delivery, and as she had not suffered any hemorrhage I supposed that a loose placenta was contained in the fairly well contracted uterus, as I have found on former occasions. So I assured her that all would soon be well and that I would be careful not to hurt her and remove the placenta without an anesthetic. Upon vaginal examination the uterus was found sufficiently open to easily admit my hand, but after having my hand within the uterus I found that the contractions were limited to one side of that organ and that the other side, or that part of it to which the placenta was attached, the left and upper part, was quite soft. Instead of finding a loose placenta, I found one that was very closely adherent throughout its whole surface and beginning to peel off at one edge. Uterine contractions took a firm hold upon my hand and I was able to remove but a handful of tissue.

This proved very painful, so I decided to administer chloroform and do the work thoroughly, but even under the anesthetic I was not able to do much better. Finally, and in four attempts, I got away about three-fourths of this adherent placenta; the upper portion I was not able to remove, so I washed out the vagina and left the balance of the placental tissue to come away by itself rather than use a curette or other means for its removal. I ordered a vaginal douche of boiled water to be given every morning and had her take two grains of quinine and one and a half grains of Dover's powder every four hours until the rest of the placenta came away, which happened on the eve of the fourth day after delivery; in the meanwhile I was on the lookout for any trouble that might appear. The lady made an afebrile recovery and the lochial discharge was not interrupted.

There being no after-pains in the case, though the uterus was contracted, it did not seem that the ordinary methods to remove the placenta, such as the Dublin grip, the Credé method, or the combined Credé and traction methods could be employed: the latter could not be applied at all, there being nothing to make traction upon, so I chose the peeling off, as you have heard. Possibly I might have done as well to adopt the expectant method, yet so far as I know, this is not being practiced much at the present day, and leaves too much room for criticism should infection or hemorrhage set in; the former would not have been unlikely after the manipulation the patient had undergone, for the midwife had repeatedly put her hand up to feel and find the placenta

As my object in bringing this case to your notice is more for the purpose of drawing a discussion of what should be done in cases of this kind, rather than to lay down rules of procedure, I shall be pleased to listen to your views and experience, provided you have been sufficiently interested.

THE STATE MEDICAL SOCIETY OF WISCONSIN.

ORGANIZED 1841.

Officers for 1903-1904.

F. E. WALBRIDGE, Milwaukee, President.
JAMES MILLS, Janesville, 1st Vice-Pres. C. C. GRATIOT, Shullsburg, 2nd Vice-Pres.
CHAS. S. SHELDON, Madison, Secretary. S. S. HALL, Ripon, Treasurer.

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1st Dist., J. G. Meachem, - - - - Racine
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10th Dist., J. M. Dodd, - - - - Ashland
11th Dist., E. L. Boothby, - - - Hammond.

Next Annual Session, Milwaukee, June 22, 23, 24, 1904.

The Wisconsin Medical Journal, Official Organ.

SOCIETY PROCEEDINGS.

ORGANIZATION NOTES.

So far as primary organization is concerned these notes are fortunately nearly at an end. The six counties reported unorganized last month were: Adams, Richland, Calumet, Waushara, Door and Kewaunee. Of these Waushara has been added to Green Lake, making the Green Lake-Waushara County Medical Society. Adams has been added to Juneau, making the Juneau-Adams County Medical Society. Richland county has been organized, but has not yet reported. The same is true of Calumet and the last one of all—the Kewaunee-Door County Medical Society. This makes 61 County Medical Societies in all. Walworth has received her charter during the month, the fifty-seventh issued. The present membership of all the societies is 1,225.

Annual Meeting.

The House of Delegates will hold its first session at the rooms of the Milwaukee Medical Society (Goldsmith building) at 8 o'clock, on the evening of the 21st (Tuesday). It is of the utmost importance that every county shall be represented. If for any reason the regular delegate is unable to attend the meeting, an alternate delegate should be appointed by the President of the County Society, if he has not been already elected. At this meeting, besides much other important business, each Councilor "will make an annual report of his work, and of the condition of the profession of each county in his district."

The Committee on Credentials and Registration will meet in the Athenaeum building on Wednesday morning at 9 o'clock. Each member in attendance will enter his name on the registration book, indicating the component society of which he is a member. When his right to membership has been verified he will receive a badge, and a certificate of membership, which shall be evidence of his right to all the privileges of the session. No member or delegate shall take part in any of the proceedings of the session who has not complied with these provisions.

Transportation.

You are reminded again to be sure to get a certificate from your railroad agent when purchasing a ticket for Milwaukee. This certificate, when endorsed by the Secretary of the Society, and the special railroad agent, entitles the holder to a return ticket for one-third the usual fare; we must secure 100 such certificates to get reduced rates. Leave these with the Assistant Secretary at the Registration Office when registering. A charge of 25 cents will be made by the special agent for each certificate. This may be paid to the Assistant Secretary along with the certificate.

Entertainments.

A complimentary smoker will be held at the rooms of the Milwaukee Medical Society, Goldsmith building, corner Wisconsin and Jefferson streets, Wednesday evening, June 22nd. It begins at 8 o'clock and will occupy the entire evening. Everyone should be on hand—especially the new members. This is intended to be a lovefeast for the whole membership. It affords a capital opportunity for getting acquainted with each other in an informal and pleasant way, and is a good introduction to the other exercises of the meeting.

The supper and concert—to take the place of the usual banquet—will be at the Deutscher Club, corner Ninth street and Grand avenue, on Thursday evening, June 23rd, at 7:30 o'clock. This is another social event that you cannot afford to miss. The ladies are especially invited and will be present in force. The ticket—$1.00—will be purchased of the Treasurer or the Committee of Arrangements before Thursday evening, and will be presented at the Ninth street entrance to the Deutscher Club. No admission without a ticket.

For the visiting ladies: There will be an informal reception at the Hotel Pfister on Wednesday evening, June 22nd, at 8 o'clock (while the men are at the smoker). On Thursday noon, June 23rd, there will be a coach ride, followed by a luncheon; the details will be announced later.

For the information of visiting members: The Athenaeum building is on the corner of Cass and Biddle streets, three blocks north of Wisconsin street. Register as soon as you get to the meeting and then stay till the final adjournment. It will be time well spent and you will never regret it. C. S. S.

DELEGATES TO THE STATE MEDICAL SOCIETY OF WISCONSIN.

County—	Delegate—
Ashland	M. S. Hosmer, Ashland.
Barron-Gates-Polk	Gents Perry, Amery.
Brown	B. C. Brett, Green Bay.
Chippewa	C. A. Hays, Chippewa.
Clark	D. R. Freeman, Colby.
Crawford	S. F. Smith, Gays Mills
Dodge	H. B. Sears, Beaver Dam.
Dane	N. C. Evans, Mt. Horeb.
Douglas	C. D. Conkey, Superior.
Dunn	E H. Grannis, Menomonie
Eau Claire	E. H. Parker, Eau Claire.
Fond du Lac	J. W. Burne, Oakfield.
Grant	J. C. Betz, Boscobel.
Green Lake	J. S. Walbridge, Berlin
Green	N. A. Loofbonrow, Monroe.
Iowa	T. S. Lawler, Cobb
Iron	A. Uren, Montreal.
Jefferson	J. M. Fleicher, Watertown.
Junean	E. H. Townsend, New Lisbon.
Kenosha	Henry J. Stalker, Kenosha.
Lafayette	E. S. Hooper, Darlington.
La Crosse	Edward Evans, La Crosse.
Langlade	J. D. Steffen, Antigo.
Lincoln	A. R. Wittman, Merrill.
Manitowoc	J. F. Pritchard, Manitowoc.
Marathon	D. L. Sauerhering, Wausau
Marinette	M. D. Bird, Marinette.
Marquette	Thos. Lister, White Creek.
Milwaukee	W. H. Washburn, F. Shimonek, A. J. Burgess, H. M. Brown.
Monroe	W. T. Sarles, Sparta.
Oconto	
Oneida	C. D. Packard, Rhinelander.
Outagamie	D. A. Titus, Kaukauna.
Ozaukee	W. F. Scott, Port Washington.
Price	W. P. Sperry, Phillips.
Portage	W. W. Gregory, Stevens Point
Pierce	
Racine	F. J. Pope, Racine.
Richland	
St. Croix	F. W. Epley, New Richmond.
Rock	Samuel Bell, Beloit.
Sauk	
Shawano	L. Rorthman, Wittenberg.
Sheboygan	W. H. Gunther, Sheboygan.
Taylor	C. E. Nystrum, Medford.
Trempealeau-Jackson	Jas. Littenberger, Arcadia.
Vernon	M. Surenson, Viroqua.
Vilas	A. B. Rosenberry, Arbor Vitae.
Walworth	B. O. Reynolds, Lake Geneva.
Washburn-Sawyer-Burnett	J. P. Cox, Spooner.
Washington	J. E. Reichert, Schleisingerville.
Waukesha	B. M. Caples, Waukesha.
Waupaca	L. H. Pelton, Waupaca.
Winnebago	W. A. Gordon, Winnebago
Wood	O. T. Hougen, Grand Rapids.

PROGRAM OF THE 58TH ANNUAL MEETING OF THE STATE MEDICAL SOCIETY OF WISCONSIN.

ORDER OF PROCEEDINGS.

WEDNESDAY, JUNE 22, 1904.

MORNING SESSION—11:00 O'CLOCK.

Call to Order by the President—F. E. Walbridge.

Invocation.

Address of Welcome—Hon. David S. Rose, Mayor of Milwaukee.

Response by the President of the Council.

Report of Arrangement Committee—A. T. Holbrook (Chairman.)

Report of Program Committee—H. B. Hitz (Chairman).

Report of President of the Council—W. T. Sarles.

RECESS.

WEDNESDAY AFTERNOON—2:00 O'CLOCK.

The President's Address—F. E. Walbridge, Milwaukee.

The Indication for Enterotomy in Intestinal Obstruction, with Report of some Cases—F. Shimonek, Milwaukee.

Discussion opened by H. Reineking, Milwaukee; W. A. Batchelor, Milwaukee, and A. J. Burgess, Milwaukee.

The Moral Aspect of Abortion, Craniotomy, and Extra-uterine Pregnancy—T .L. Harrington, Milwaukee.

Discussion opened by A. J. Burgess, Milwaukee; Edward Evans, La Crosse.

The Use of Drugs in Labor—J. F. Ford, Omro.

Discussion opened by Harry B. Sears, Beaver Dam; Ernest C. Helm, Beloit, and L. H. Pelton, Waupaca.

Intermittent Claudication and Analogous Phenomena (Angina Pectoris, etc.)—Arthur J. Patek, Milwaukee.

Discussion opened by W. F. Wegge, Milwaukee; W. H. Sheldon, Madison; W. H. Washburn, Milwaukee.

Estimation of Indemnity in the Case of Accidental Loss of One or Both Eyes—H. V. Würdemann, Milwaukee.

Discussion opened by W. Kempster, Milwaukee; Chas. Zimmermann, Milwaukee; F. T. Nye, Beloit.

THURSDAY MORNING, JUNE 23, 1904.

9:00 O'CLOCK.

Regarding the Lack of Progress in Scientific Therapeutics—E. L. Boothby, Hammond.

Discussion opened by C. C. Gratiot, Shullsburg; A. B. Newton, Bangor; G. C. Buck, Platteville.

The Therapeutic Uses of the Roentgen-Ray in Dermatology—Louis Frank, Milwaukee.

Discussion opened by A. W. Myers, Milwaukee, and J. D. Madison, Milwaukee.

10:30 O'CLOCK.

The Annual Address in Medicine—James C. Wilson, Professor of Practice of Medicine, Jefferson Medical College, Philadelphia, Pa.

Importance of the Early Removal of All Neoplasms, Whether Malignant or Benign, with Illustrated Cases—C. W. Oviatt, Oshkosh.

Discussion opened by H. A. Sifton, Milwaukee; Herman Reineking, Milwaukee, and William Mackie, Milwaukee.

Affections of the Facial Nerve in Ear Diseases—Chas. Zimmermann, Milwaukee.

Discussion opened by H. B. Hitz, Milwaukee, and J. A. L. Bradfield, La Crosse.

Chronic Continued Secretion of the Gastric Juice—L. F. Jermain, Milwaukee.

Discussion opened by W. H. Neilson, Milwaukee, and W. H. Washburn, Milwaukee.

Hydronephrosis—G. D. Ladd, Milwaukee.

Discussion opened by William Mackie, Milwaukee; Richard Dewey, Wauwatosa; J. F. Pritchard, Manitowoc.

THURSDAY AFTERNOON, 2:00 O'CLOCK.

A Glimpse Into the Past, Present and Future of Therapeutics—S. R. Moyer, Monroe.

Discussion opened by J. A. Ballard, La Crosse; J. F. Pember, Janesville; C. C. Gratiot, Shullsburg.

A Review of Laryngeal Diphtheria with a Report of Cases—P. H. McGovern, Milwaukee.

Discussion opened by E. W. Kellogg, Milwaukee, and Wilhelm Becker, Milwaukee.

On the Establishment of an Epileptic Colony in Wisconsin—W. A. Gordon, Oshkosh.

Discussion opened by Richard Dewey, Wauwatosa; W. F. Becker, Milwaukee, and E. L. Bullard, Mendota.

4:00 O'CLOCK.

The Annual Address in Surgery.

The Surgical Treatment of "Dyspepsia"—Roswell Park. Professor of Surgery, University of Buffalo, Buffalo, N. Y.

Surgical Treatment of Cirrhosis of Liver with Report of a Case —William Mackie, Milwaukee.

Discussion opened by Edward Evans, La Crosse, and C. W. Oviatt, Oshkosh.

The Therapeutics of Diseases of the Female Pelvis—Gustav Kletzsch, Milwaukee.

Discussion opened by Frank S. Wiley, Fond du Lac; J. F. Pritchard, Manitowoc; T. W. Nuzum, Brodhead.

Early Diagnosis of Ectopic Gestation—W. E. Ground, Superior.

Discussion opened by A. J. Burgess, Milwaukee; C. W. Oviatt, Oshkosh; Edward Evans, La Crosse.

Report of Case of Perineo-Rectal, Transvesical Perforation of Peritoneum—Edward Evans, La Crosse.

Discussion opened by D. S. McArthur, La Crosse; M. E. Corbett, Oshkosh; W. F. Malone, Milwaukee.

FRIDAY MORNING, JUNE 24, 1904.

9:00 O'CLOCK.

"Radio-activity." The Therapeutic Results We May Expect at Its Present Stage of Development—Wm. Sickles, Milwaukee.

Discussion opened by C. S. Smith, Elroy; H. C. Reich, Sheboygan.

Quantitative Estimation of Urea and Its Significance—C. J. Combs, Oshkosh.

Discussion opened by H. W. Abraham, Appleton; D. W. Harrington, Milwaukee, and J. W. Conley, Oshkosh.

Some Methods of Home Modification of Milk in Infant Feeding —A. W. Myers, Milwaukee.

Discussion opened by L. Boorse, Milwaukee; A. F. Heising, Menomonie; Carl M. Beebe, Sparta.

General Practice in Northern Wisconsin—J. P. Cox, Spooner.

Discussion opened by E. L. Boothby, Hammond; J. B. Trowbridge, Hayward.

DIRECTORY OF COUNTY SOCIETIES.

COUNTY.	PRESIDENT.	SECRETARY.
Ashland	W. T. Rinehart, Ashland.	N. N. Glim, Ashland.
Barron-Gates-Polk	O. M. Sattre, Rice Lake.	I. G. Babcock, Cumberla'd
Bayfield	H. G. Lampson, Washb'n	T. B. Hicks, Washburn
Brown	D. H. Gregory, De Pere.	A. V. de Neven, Gr'n B'y
Buffalo-Pepin	M. B. Axtell, Pepin	P. B. Amunson, Mondovi.
Chippewa	C. A. Hayes, Chipp. Falls.	R. B. Cunningham, Cadott
Clark	D. R. Freeman, Colby	V. M. French, Neillsville.
Columbia	J. J. Howard, Columbus.	F. D. Bentley, Portage.
Crawford	G. H. Perrin, Wauzeka	A. J. McDowell, Sol. Gr'v
Dane	C. A. Harper, Madison	R. H. Jackson, Madison.
Dodge	E. M. McDonald, B. Dam.	H. B. Sears, Beaver Dam.
Douglas	George Saunders	W. W. Pretts, Superior.
Dunn	E. H. Grannis, Menomo'e.	G. A. Barker, Menomonie
Eau Claire	J.V.R.Lyman, Eau Claire.	H. A. Fulton, Eau Claire.
Fond du Lac	J.H.McNeil, Fond du Lac.	Flora A.Reed, FondduLac.
Forest-Florence	C. A. Decher, Crandon	S. M. B. Smith, Crandon.
Grant	J. Oettiker, Platteville	P. L. Scanlan, Lancaster.
Green	Sam'l Moyer, Monroe	Wm. B. Monroe, Monroe.
Green Lake	C. E. Thayer, Markesan.	B. E. Scott, Berlin.
Iowa	W. J. Pearce, Dodgeville.	S. P. Deahofe, Mineral Pt.
Iron	J.H.Urquhart, Iron Belt.	T. J. Hambley, Hurley.
Jefferson	Wm. W. Reed, Jefferson.	C. E. Lander, Johnson C'k
Juneau	J. B. Edwards, Mauston.	A. T. Gregory, Elroy.
Kenosha	G. Windesheim, Kenosha	F. E. Andre, Kenosha.
La Crosse	F. C. Suitor, La Crosse	C.H.Marquardt, La Crosse
Lafayette	C. C. Gratiot, Shullsburg.	C.Lehnkering, Darlington
Langlade	I. D. Steffen, Antigo	Frank I. Drake, Antigo.
Lincoln	W. H. Monroe, Merrill	C. C. Walsh, Merrill.
Manitowoc	Louis Falge, Reedsville	J. E. Meany, Manitowoc.
Marathon	D. La Count, Wausau	H. L. Rosenberry, Wausau
Marinette	T.J.Redelings, Marinette.	A. T. Nadeau, Marinette.
Marquette	W.J.Thompson, Briggsv'l	W. O. Dyer, Westfield.
Milwaukee	G.E.Seaman, Milwaukee.	A. W. Gray, Milwaukee.
Monroe	G. R. Vincent, Tomah	C. M. Beebe, Sparta.
Oconto		A. S. White, Gillett.
Oneida	C.D.Packard, Rhinel'der.	S. R. Stone, Rhinelander.
Outagamie	C. D. Boyd, Kaukauna	M. J. Sandborn, Appleton
Ozaukee	E. E. Couch, Pt. Wash	Thos.A.Berwick, Saukville
Pierce	Henry C. Cotton, Presc'tt	D.Woodworth, Ellsworth.
Portage	Galen Rood, Stevens Pt	C.v.Neupert, Jr., Stev's Pt.
Price	W. P. Sperry, Phillips	A. D. Gibson, Park Falls.
Racine	W. S. Haven, Racine	C. F. Browne, Racine.
Rock	Ernest C. Helm, Beloit.	G. W. Fifield, Janesville.
Sauk	Chas. Gorst, Baraboo	G. L. Cramer, Baraboo.
Shawano	W.H.Cantwell, Shawano.	H. W. Partlow, Shawano.
Sheboygan	O. J. Gutsch, Sheboygan.	H. C. Reich, Sheboygan.
St. Croix	E.L.Boothby, Hammond	L. P. Mayer, Hudson.
Taylor	E. LeSage, Medford	J. H. Francis, Medford.
Trempealeau-Jackson	G. N. Hidershide, Arcadia	Henry A. Jegi, Galesville
Vernon	J. K. Schreiner, Westby.	C.H.Trowbridge, Viroqua
Vilas	A.B.Rosenberry, Arbor V.	W. E. Wray, Minocqua.
Walworth	B. J. Bell, Genoa Junct'n	W. A. Loops, Darien.
Washb'n-Sawy'r-Burn'tt.	J.B.Trowbridge, Hayw'd.	E. R. Hering, Shell Lake.
Washington	H. Blank, Jackson	G. A. Heidner, West Bend
Waukesha	B. M. Caples, Waukesha.	A. J. Hodgson, Waukesha.
Waupaca	L. H. Pelton, Waupaca	J. F. Corbett, Weyauwega.
Winnebago	G. M. Steele, Oshkosh	S. B. Aeklev, Oshkosh.
Wood	O. T. Hougen, G. Rapids.	F. Pomainville, G.Rapids

DOUGLAS COUNTY MEDICAL SOCIETY.

The membership roll of Douglas County has been increased to thirty-one members out of thirty-eight physicians practicing in the county. Those who have recently been elected to membership are: Drs. J. C. Adams, E. T. Gauvreau, J. A. René and Elmer H. Thompson.

While the attendance at the meetings has not always been up to expectations in so far as numbers are concerned, the enthusiasm and the work accomplished has been of the highest type. Of the papers presented before the Society, those of Dr. S. G. Pake, Dr. J. J. Quim and Dr. Wm. E. Ground were particularly interesting. Dr. Pake spoke on "*High Frequency Currents*" as a therapeutic agent, and reported very good results, especially in affections of the skin, superficial inflammations, and goitre. Of the last, some twenty cases were reported with either marked improvement or cures in nearly every case.

Dr. Quim, in speaking of "*Purulent Ophthalmia of the Newborn,*" laid stress on the following points: 1. The frequency with which the affection occurs. 2. The ease of prevention by the routine use of solutions of silver nitrate. 3. Early diagnosis. 4. Careful eversion of the eyelids with special care to avoid puncture of the cornea. 5. Thorough irrigation with a solution of boric acid and careful applications of solutions of silver nitrate, from 2-10%. 6. Intelligent and careful nursing with especial attention to improving the general nutrition.

Dr. Ground gave a very thorough discussion of "*Ectopic Gestation,*" and emphasized the difficulty in making a diagnosis and the frequency with which patients had been operated upon for other conditions only to find the existence of an ectopic gestation. In the discussion of the paper, Dr. L. A. Potter mentioned having seen a specimen of double tubal pregnancy.

At the April meeting Dr. L. A. Potter, Dr. C. D. Conkey and Professor B. B. James of the high school presented papers on the "*Systematic Medical Examinations of School Children.*" Dr. Potter presented the general arguments, Dr. Conkey presented the points in favor from the standpoint of the specialist, and Professor James discussed the matter from the teachers' standpoint. By a unanimous vote the papers and resolutions presented were referred to the Board of Education of Superior asking that some arrangement be made for putting the ideas suggested into practice in all the schools of the city.

Douglas County Medical Society has possessed for some time a library of modest, but constantly increasing proportions. It has recently been established in the new Carnegie Library building and is now to be placed in a separate room away from the hands of the general public and yet convenient for the members of the Society.

Clinical Reports.—Dr. C. D. Conkey reported a case of fibrous union of the jaws in a man 40 years of age. The condition had existed from childhood and had been only temporarily relieved after several operations.

Dr. C. H. Mason reported a case of twins in one of which the first three fingers and the thumb of each hand had suffered intrauterine amputation.

Dr. H. A. Russell reported an obstetrical case presenting these interesting points: 1. Marginal attachments of the placenta. 2. Occipito-posterior presentation. 3. Double thumbs on both hands of the child.

Dr. Geo. Saunders called attention to two cases of uremia occurring in the city following operations for appendicitis. Both cases terminated fatally. Chloroform was used exclusively in both cases. One case showed a "trace" of albumin in the urine previous to the operation, but the uremic symptoms did not develop until twenty-four hours after the operation.

W. W. PRETTS, M. D., Sec'y.

GRANT COUNTY MEDICAL SOCIETY.

The regular meeting of the Grant County Medical Society was held at Platteville, May 12, 1904. Ten members were present. Drs. Hancock and Gratiot of Dubuque, Lewis of East Dubuque, and Dunn of Belmont were present as visitors.

Five new members were admitted: Drs. W. P. Hartford, Cassville; J. E. Heraty, Bloomington; J. S. Cocklin, Livingstone; C. A. Cooper, Montfort, and W. R. Cornbe, Blue River. There are now only eight physicians in Grant County who do not belong to the society, and every physician in this county has either a license or registration with the State Board.

Two resolutions were passed, the first favoring good roads and endorsing the Brownlow Bill; the second endorsing the Pure Food and Drug Bill. The subject of the registration of births and deaths was discussed, but no action was taken.

Dr. MacDonald read a paper on "Infantile Diarrhea," which was discussed by those present.

Dr. Bishop's paper on "Rheumatism" was read by the secretary.

An informal discussion on "Goitre" was an interesting feature of the meeting.

The next session will be held at Montfort.

P. L. SCANLAN, M. D., Secretary.

GREEN LAKE-WAUSHARA COUNTIES MEDICAL SOCIETY.

At the meeting held in the City Council Chamber, Berlin, April 28, 1904, Dr. Bothwell, in a paper entitled *A Plea for a More Thorough Study of Obstetrics*, cited the needs of the profession in this regard and suggested among other things, better remuneration as one of the means of creating greater interest and care in this branch of practice.

Dr. J. S. Walbridge read a paper on *Arterio-Sclerosis*, describing the disease, its cause, and treatment, or rather the care of the patient. He cited results of recent study of this condition and gave it as his opinion that a large majority of the supposed cases of apoplexy occurring in arterio-sclerotic subjects are in reality thrombosis. His deductions as to treatment, both prophylactic and after occurrence of the lesion, are heart tonics with the nitrites or nitroglycerine to dilate arterioles. Regarding the exhibition of heart tonics in arterio-sclerosis, in his opinion the danger of thrombosis, during a time when vital activities are at a minimum, is greater than that of rupturing a vessel by stimulating the circulation. The doctor closed by making a plea for more care in discovering the existence of hardened arteries, so as to institute prophylactic treatment and avoid either thrombosis or hemorrhage.

Dr. Ralph Buckland of Princeton read a paper on *Influenza*, giving a history of epidemics and describing the disease from a clinical, etiologic and

therapeutic standpoint. Under treatment he insisted on putting patient to bed until the fever subsides; strychnia when the heart is weak, and quinine for its specific action on the infection or toxins. Other treatment is symptomatic, meeting complications as they occur. The discussion brought out a diversity of opinion regarding quinine, some preferring calcium chlorid.

Dr. Wilcox reported a case of rupture of the uterus during induced labor at 7½ months in a patient with nephritis, with recovery. Also a case of double impregnation delivered of healthy child at full term and a second fetus of about five months imbedded in a second placenta. He exhibited the specimen.

The society voted to change its name to "Green Lake-Waushara County Medical Society," so as to include physicians of Waushara County, which had not become organized.

Six new members were admitted: Drs. Wm. Wilcox, Wild Rose; Moffatt, Roy Sippe; Trost, Plainfield; Lathrop, Wautoma; May, Red Granite; Clement, Berlin, and Loope, Eureka.

The wives of local physicians served a banquet to visiting doctors which proved a very pleasant social affair. B. E. SCOTT, M. D., Secretary.

MEDICAL SOCIETY OF MILWAUKEE COUNTY.

The regular monthly meeting was held in the Public Museum building, May 13, 1904. The president, Dr. G. E. Seaman, in the chair. Forty-five members were present.

Dr. Dearholt reported progress for the Tuberculosis Committee, which is instituting an educational campaign in this city.

A communication was read from Dr. Grosskopf, Superintendent of the County Hospital, requesting that a committee be appointed to investigate into charges recently made against the management and medical staff of the institution. A committee of five, consisting of Drs. T. L. Harrington, W. A. Sickles, L. C. Tisdale, J. DeBesch and A. W. Gray was appointed.

Dr. C. O. Thienhaus presented an X-ray photograph of a transverse fracture of the patella of two years' duration which was wired successfully.

Dr. J. W. Coon gave an informal talk upon things of medical interest seen during a recent trip through New Mexico.

Dr. H. L. Nahin read a paper on "Dangers Common to All Operative Interference and How to Avoid Them," discussing the subject under the heads of surgical shock, hemorrhage, and infection. A. W. GRAY, M. D., Secretary.

TAYLOR COUNTY MEDICAL SOCIETY.

The first meeting of the Taylor County Medical Society was held at Rib Lake on April 4.

Interesting papers were read by Dr. C. E. Nystrum, of Medford, and Dr. Werner, of Rib Lake.

Dr. G. C. Wechman, of Rib Lake, was elected to membership. The organization now includes all the physicians in the county, with only two exceptions. Dr. C. E. Nystrum, of Medford, was elected delegate to the State Medical Society.

The next meeting will be held July 11. J. H. FRANCIS, M. D., Secretary.

MILWAUKEE MEDICAL SOCIETY.

Meeting of April 26, 1904. President Schiller in the chair. Present twenty-nine members, three guests.

The president appointed the following committee for the "Smoker" to be given to the State Medical Society: Drs. A. W. Gray, Wm. Thorndike and H. E. Dearholt.

Dr. H. B. Hitz exhibited a case of "Chronic Otitis Media." Discussed by Dr. Würdemann.

Dr. A. J. Patek presented a paper on "Dermatitis Exfoliativa Neonatorum," which was discussed by Drs. Foerster, Kellogg, Schiller and Mishoff.

Dr. Beffel exhibited several pathological specimens and called upon Drs. Cavaney, Washburn and Reineking for clinical histories of the cases.

Meeting of May 10, 1904. Present 28 members, 5 guests.

Dr. H. E. Dearholt exhibited a case of "Tuberculous Synovitis of the Ankle Joint" that had been under treatment for one year. The ankle appears to be perfectly cured, both anatomically and functionally. The case was discussed by Drs. Reineking, Studley, Brooks, Kaumheimer, Mishoff and Puls.

Dr. W. T. Nichols exhibited a ruptured liver from a baby which died four days after birth with symptoms of internal hemorrhage. Violence during parturition was given as the probable cause of the injury.

Dr. G. E. Seaman presented photographs and history of a case of herpes zoster of the fifth nerve, with involvement of the cornea. The case recovered with very little searring.

Dr. Philip Rogers exhibited a patient with Elephantiasis, who had been under treatment for four years. Without being able to find any literature on the subject of surgical intervention, he proceeded to extirpate large masses of the redundant tissue with most excellent results. Photographs, taken before treatment was begun, were exhibited and showed that a great improvement had taken place. The patient now walks with comparative ease and comfort, while the deformity is hardly noticeable when the patient is dressed. The girth of the thighs and legs have been greatly reduced. The case was discussed by Drs. Kaumheimer, Schiller, Seaman, Kramer and Brown.

Dr. Reineking reported a case of carcinoma of the stomach in which he had removed the entire organ. At the time of reporting, four days after the operation, the patient was getting on nicely. The pathological specimen was exhibited.

Regular meeting, May 24, 1904. Present 22 members and 3 guests. Upon motion Dr. T. H. Hay was unanimously elected chairman *pro tem.*

Dr. S. H. Friend read a paper upon "*Prostatic Crises in Tabes.*" He reported three cases in which he was satisfied that the prostate gland was the seat of the pain complained of in the perineum and rectum. The paper was discussed by Drs. Wingate, Myers and Barth.

By invitation Dr. D. E. W. Wenstrand presented an excellent paper upon *"The Study of the Hemolysis of Rabbit's Blood Corpuscles by Human Serum.* Together with a review of some of the late literature on Immunity." He gave a review of the theories of immunity, after which he reported the results and conclusions of the original work done at the laboratories of Rush Medical College, under the supervision of Prof. Hektoen. Discussed by Drs. Gray and Nolte.

The chairman announced the death of an honorary member, Dr. Almon Clarke, and Drs. Nolte, Patek and Chrysler were appointed a committee to draw up resolutions of condolence.

H. E. Dearholt, M. D., Secretary.

SOCIETY OF GERMAN PHYSICIANS AT MILWAUKEE.

Instead of holding a regular meeting, the society, on April 12, 1904, attended the clinic of Dr. Nicholas Senn at the Presbyterian Hospital, Chicago. From 2 to 7 p. m. Dr. Senn performed a great number of operations and gave very interesting clinical demonstrations. After the clinic Dr. Senn entertained the members and a few guests at a very pleasant banquet.

C. Zimmermann, M. D., Secretary.

BOOK REVIEWS.

Annual Report of the Surgeon-General of the Public Health and Marine Hospital Service of the United States. For the Fiscal Year 1903.

Government Printing Office, Washington.

This annual report of the Surgeon-General to the Secretary of the Treasury contains some very valuable chapters. The statistical record of contagious diseases is of great importance and a few excerpts may be found interesting. During the year 1903 there were reported in forty-four states 42,590 cases of smallpox, with 1,642 deaths, a mortality of 3.8 per cent. Various literature on the prevention and suppression of smallpox has been distributed.

There were reported thirty-eight cases of plague in the Chinese district of San Francisco. Great difficulty was encountered in detecting these cases in San Francisco, but a satisfactory understanding has now been reached with the city officials and their co-operation will make any future outbreak less formidable.

The total number of patients treated in the twenty-three marine hospitals was 58,573; in the sanatorium for consumptives at Ft. Stanton, N. M., 274 patients were treated. Of these twelve were discharged, recovered; fifty-four improved; ten not improved; 150 remaining under treatment.

During the fiscal year 857,046 immigrants were inspected by the officers of the service as to their physical fitness for admission, as prescribed by the immigration laws.

Four new hospitals are projected, one each in New York, Pittsburg, Buffalo and Savannah. The work of the Hygienic Laboratory has been along lines pertaining to the public health, examination of water supplies, a study of the action of various disinfectants and germicidal agents, the investigation of diseases and conditions of sanitary and economic importance.

Arrangements have been completed to inspect all laboratories manufacturing vaccine virus, serums, toxins and analogous products, preliminary to the issue of licenses for the sale, barter, or traffic in such products.

The report of the Assistant Surgeon-General in charge of the several divisions of the Bureau follows.

It is interesting to note one of the resolutions adopted by the First General International Sanitary Convention of American Republics, reading—that "measures of prophylaxis against yellow fever shall be based upon the fact that up to the present time the bite of certain mosquitoes is the only proven natural means of propagation of yellow fever."

A series of case reports by various surgeon-generals follows, and a very complete statistical table of the cases treated by the Marine Hospital service from 1868 to 1903. (A. J. P.)

CURRENT LITERATURE.

SURGERY.

F. E. Walbridge, M.D., H. A. Sifton, M.D., F. Shimonek, M.D.

Surgery of the Stomach.—W. H. Wathen (*Journal of the Amer. Med. Ass'n.*, May 14, 1904) lays considerable stress on the importance of early diagnosis and operation in diseases of the stomach.

Wathen thinks that von Mikulicz is wrong in his opinion that cancer of the stomach is much more prevalent than ulcer of the stomach, because he operates on about four times as many cases of the former as he does of the latter. The reverse is practically true of Dr. Mayo. The author says "Hence von Mikulicz takes this as the measure of the relative number of benign and malignant diseases of the stomach in Germany and the United States."

Wathen cites some statistics of necropsies in the Vienna Hospital which incline him to the belief that von Mikulicz's operations were not always timely, cancer having developed in an ulcer or about a cicatrix.

He says that Dr. Mayo diagnosis his case and operates in the precancerous stage, hence the much better immediate and ultimate results. (F. S.)

Intussusception in Children.—John F. Erdmann (*New York Med. and Phil. Med. Journal*, May 14, 1904) gives his views on intussusception in children.

The symptom always present in his cases, twenty-six in number, is blood, bloody stools, bloody mucus, or bloody serum in the discharges. Little reliance is to be placed upon the presence of a tumor. In twenty-three of his cases no tumor could be detected.

Sudden pain is almost invariably the first symptom. This is followed by shock, varying in intensity, and efforts at defecation, manifestations of spasmodic pains, a peculiar whining cry or fits of crying. During the first hour or two the abdomen is soft and not tender on palpation. As a rule no tumor is felt. Then follows distension and evidences of obstruction varying in degree according to the degree of obstruction. There is always an acceleration of the pulse and elevation of temperature.

In the treatment of intussusception enemas have little value as they seldom result in reduction and by their use valuable time is lost. Reduction by enema is sometimes partial, thus facilitating complete reduction and limiting shock.

Traction should never be used except as a means of directing the expulsion in its proper course "A little patience and gentle compression aided with a backward and forward motion of the unreduced mass, allied to attempts at reduction and production of the condition, is usually followed with success."

(F. E. W.)

Some Observations on Surgery of the Common Ducts of the Liver.—W. J. Mayo (*Med. Record*, April 30, 1904) gives his views on the surgery of the common duct drawn from 107 operations which occurred in 728 operations on the gall-bladder and bile passages. He believes the gall-bladder is infected through the bile in the great majority of cases, and not by way of the common duct and duodenum; also that a gall-bladder once infected remains so, needing only some disturbing element to reproduce its original intensity.

An infected gall-bladder containing stones gives the most favorable condition for bacterial invasion of the common duct. Ninety per cent. of common duct diseases, calling for operation, arises in this way: for this reason he advises operation early when the stones and infection are confined to the gall-bladder.

When only the gall-bladder is infected, and the cystic duct is closed, it will usually be found to be cystic, and should be removed. If the obstruction is caused by a stone in the pelvis or cystic duct, its removal will allow drainage through the gall-bladder. If there is no infection of the ducts, the gall-bladder may be removed without drainage. If an infected gall-bladder contains bile, showing an open cystic duct, drainage to the surface must be provided.

Drainage can usually be had through the gall-bladder or cystic duct, though rarely this is not sufficient, in which case direct tube drainage is provided. Stones in the deeper ducts may be latent, therefore the ducts must always be examined, as all stones in this locality should be removed.

(F. E. W.)

PEDIATRICS.

T. H. Hay, M.D., R. C. Brown, M.D., A. W. Gray, M.D.

The Etiology of Rachitis.—Roland G. Freeman. (*Arch. Pediatrics*, April 1904) in summarizing some experimental work carried on to determine the cause of rickets, and after referring to some collective observations in three groups of infants from hospitals and tenements in New York, comes to the following conclusions:

(1) Experiments on animals would seem to indicate that unsuitable food

is capable of producing rachitis; and that possibly certain bacteria or intestinal toxins may produce a similar result.

(2) The clinical observations are too limited for any positive deductions, but are interesting inasmuch as they indicate less rachitis in the tenement, than in the institution, children fed on modified milk, and the greatest amount of rachitis in institution babies fed on breast milk with auxiliary feedings of condensed milk. (R. C. B.)

The Anterior Fontanelle.—J. R. CLEMENS (*Medicine*, March, 1904) says a minute knowledge and a correct interpretation of the changes which take place in the anterior fontanelle is of the utmost value.

The fontanelle should be open till the sixteenth month in a healthy baby, its level should be somewhat lower than that of the bony vault of the skull. Pulsation should be felt when moderate pressure is made.

If closed by the fifth month, the case is probably one of microcephalic idiocy; if open after the sixteenth month, it is due to one of three conditions: rickets, cretinism, or chronic hydrocephalus.

The fontanelle bulges more or less after fits of crying, struggling or coughing, in attacks of pyrexia, and in whooping cough; greatest bulging in cerebral tumor, chronic hydrocephalus, and meningitis.

The fontanelle is depressed in wasting diseases and acute diarrheas. He lays particular stress upon the diagnostic importance of the condition of the fontanelle in true and false meningitis. In true meningitis the fontanelle bulges, in the false meningitis of the third stage of diarrhea, it is depressed.

Another differential sign is the condition of the abdomen, which is retracted in true meningitis, distended in the false. The bulging fontanelle with distended abdomen is unknown in clinical medicine. Retraction of the neck may occur in a variety of conditions: true meningitis, false meningitis, inflamed deep cervical glands, otitis media, tetany, tetanus, strychnia poisoning, postpharyngeal abscess, and cerebral types of pneumonia and typhoid.

The condition of the fontanelle, whether normal, depressed, or bulging, often clears up the diagnosis of these cases. (T. H. H.)

Intestinal Infection by the Bacillus Dysenteriæ (Shiga) in Infants.—L. E. LAFETRA and JOHN HOWLAND, from the Rockefeller Institute of Medical Research (*Arch. of Pediatrics*, March, 1904), publish a clinical study of sixty-two cases in infants. The observations were made at the Vanderbilt Clinic during July, August, and September, 1903.

The bacillus dysenteriæ, first proved to be the cause of Japanese dysentery by Shiga, and later to be responsible for the disease in Manila, the United States, Germany, and other countries, is now universally regarded as one of the etiological factors in adult dysentery.

Duval and Bassett in 1902, working under Flexner's direction, isolated the bacillus of Shiga from the stools of infants suffering from summer diarrhea. Their results have been confirmed by many other investigators, and infection with the bacillus dysenteriæ is now believed to be the rule in a large proportion of all forms of the diarrheas of infancy, both in winter and in the summer.

In the Vanderbilt Clinic when a child was brought with a history of diarrhea, effort was made at the time of the first visit to obtain a fresh stool for immediate bacteriological examination. In forty-eight hours a bacteriological report on the presence or absence of the dysentery bacillus could be obtained.

At first only those cases were examined bacteriologically that gave the history or presented symptoms of a moderately severe diarrhea, but later, on account of the numerous positive findings, all cases of mild diarrhea and intestinal indigestion were also examined. This makes the report of far greater interest, the cases being successive ones and no selection at all having been attempted after the first four cases.

As routine measures, cow's milk was immediately discontinued and not resumed for several days; in breast-fed infants the nursing was forbidden for a time. Barley water, rice water or broth was substituted for the milk. Free catharsis was obtained by means of calomel and castor oil. Other drugs were rarely used.

Eight of the patients were under three months; fourteen were between three and six months; fifteen were between six and nine months; nine were between nine and twelve months, and fifteen were over one year; of one the age was not stated.

Of the fourteen severe cases, one was breast-fed; five were given condensed milk; two Straus' sterilized milk; two grocer's milk; three fairly clean bottled milk, and one case not stated.

There were fourteen children entirely breast-fed; two children were partly breast-fed; eleven children had been fed on grocery milk; seven on bottled milk of fair quality; eight were fed partly or wholly on sweetened or unsweetened condensed milk; five on proprietary foods without milk; two on Straus' sterilized milk; two on home sterilized milk; one on peptonized milk; four on general diet; and no statement in regard to seven. (Counted twice, one.)

There were forty-two cases in which the acid type of organism was found; fifteen were infected with the alkaline or true Shiga type; in five cases both types of the organism were found. Of the forty-two "acid" infections, nine were classified as mild cases, twenty-one as moderately severe, ten as severe, two not being classified. Of the fifteen true Shiga infections, five were mild, six moderately severe, and four severe. Of the five mixed infections, one was mild and four moderately severe.

As outlined above the majority of the cases were treated by the usual methods, both as to their management and diet. Milk, whether breast milk or cow's milk, was immediately discontinued; barley water, broth or some proprietary food, or rarely albumen water being given in its place; it was only resumed when the acute symptoms had subsided. Catharsis by calomel and castor oil was the invariable rule. When there was great irritability of the intestines, with tenesmus and numerous small stools, rectal irrigations, without or with paregoric, were employed. For temperature that gave rise to nervous symptoms, irrigations and alcohol sponging were resorted to. A bismuth mixture was used in a few cases.

An analysis of the sixty-two cases observed shows that certain points are worthy of special note.

(1) The unexpectedly great prevalence of the dysentery organism in

cases of diarrhea in infants, at least during the summer months. Thus, out of sixty-four consecutive cases examined in the Vanderbilt Clinic, sixty-two were positive.

(2) All types of diarrheal disease, as characterized by their clinical symptoms, are to be found among these cases. Some were examples of severe and some of mild ileo-colitis; others could only be classed as the mildest form of intestinal indigestion. The course of the disease, while usually short, was prolonged in eight cases.

(3) As compared with cases of summer diarrhea of other years, those in this series were in general much milder; and possibly this was due to two factors: (a) the cool summer; (b) the increasing knowledge among the tenement population of the care of infants and their food.

(4) The striking number of breast-fed infants, fourteen in sixty-two cases, more than 20 per cent of all.

The serum therapy was tried in ten cases, not a sufficient number to warrant any conclusions. While of apparent benefit in some cases, no effect whatever was noticed in others. It may be that larger dosage is necessary; but, if so, the serum must be more concentrated than at present. (R. C. B.)

NERVOUS AND MENTAL DISEASES.

Wm. F. Becker, M.D., Wm. F. Wegge, M.D.

Muscular Dystrophy.—Brasch (*Berlin klin. Wochenschrift*, Vol. 41, p. 60) reports two cases of muscular dystrophy occurring in mother and son.

The former developed pseudo-muscular hypertrophy shortly after giving birth to the son, who developed a typical infantile form of progressive muscular dystrophy. The children born at preceding confinements were normal.

The chief point of interest presented by the cases is the fact that they tend to support the contention of Erb, that all the different types of hereditary muscular atrophy or dystrophy form a nosologic entity. (W. F. W.)

Shaking Palsy Following Trauma.—Ruhemann (*Berl. klin. Wochenschr.*, Vol. 41, Nos. 13, 14, and 15) discusses this quite fully and reports seven cases out of a total of thirty-five cases of the disease observed in Jolly's clinic.

He observes that the cases developing upon a traumatic basis do not differ in any way from those having a different etiology, with the exception that in the majority of the cases of traumatic origin the disease began in the extremity affected by the trauma.

Of all the different causes of the disease, trauma appeared to be the most frequent. Syphilis appears to have been the cause in none of the thirty-five cases. He therefore believes, in agreement with Erb, that syphilis can not be considered an etiologic factor in paralysis agitans. (W. F. W.)

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JULY, 1904

ADDRESSES.

THE ANNUAL ADDRESS OF THE PRESIDENT OF THE STATE MEDICAL SOCIETY OF WISCONSIN.*

BY F. E. WALBRIDGE, M. D.
MILWAUKEE.

I feel it my first duty to thank you for the confidence you reposed in me one year ago when you tendered me the highest mark of distinction within your power to confer. When you so unanimously insisted upon my accepting this high honor I felt that the responsibility was greater than I could master, and I wish to assure you that it was for this reason only that I asked you to confer this distinction upon another more capable of assuming the duties of a position which is of the utmost importance to the profession of the state. Rest assured, too, that there was no lack of appreciation of your confidence in me or of my interest in the welfare of the profession, for—in the earnest purpose to promote the interests of medicine—I yield to no one. So, if the affairs of the Society shall have lost any of their importance and usefulness, it will be due not to a lack of earnest purpose to advance your interests, but solely to those limitations which Nature puts upon us and to which we must submit, and you, gentlemen, must bear the responsibility.

The by-laws of this Society demand that the official head of the organization deliver an address, the subject of which is left to his own choice. I assure you the responsibility is not a light one. It would be an agreeable task to discuss some scientific subject, but as each section will be represented by others well fitted for the task, I

*Read at the 58th Annual Meeting of the State Medical Society of Wisconsin, Milwaukee, June 22, 1904.

have thought it best to discuss some general questions of vital interest not alone to this society, but to the medical profession at large.

If, in this address, we look forward to and yearn for a period of improvement over present conditions, and cite instances which in our opinion stand forth prominently as demanding relief or correction, charge it to a conscious pride I own in belonging to this noble profession, to an honest effort to make more perfect those conditions that are still distant from their ideal, to a desire to expose and abrogate entirely some false situations, and to purge errors where they actually exist; but do not, I ask of you, charge me with a malicious usurpation of the privileges granted me by the high position which, by virtue of your pleasure, I occupy.

As many of you know, I have for a number of years been deeply interested in the matter of improving some existing conditions in the medical profession. There are many things that those of us who have given the matter much thought would like to see improved. It will be impossible to go over the whole ground in the time allotted me, and I am sure I should weary you in an attempt to do so; there are a few things, however, that I must detail at some length, and, unless greatly in error, I believe and sincerely trust that I shall voice your sentiments in most, if not all I say.

I desire you to follow me in a consideration of several questions that must interest—because they vitally affect—the profession of the state, and which, could they be influenced by what I believe to be the proper direction, would redound to our everlasting credit and give us reason to feel proud of Wisconsin medicine.

I would outline my address under three heads:

Medical Education.
The Relation of the Physician to the Press.
Medical Expert Testimony.

MEDICAL EDUCATION.

The subject of medical education is one in which the profession has always been deeply interested, and I believe that at the present time this interest is of more importance than ever before, and should be actively manifested.

Pride in his work ought be an attribute of every worker, and a fondness and respect for that work foster healthy activity and engender noble thoughts. More particularly does this apply to the professional worker, because his individuality is his stock in trade, and he must guard well his opportunities. Not all professional workers, however, possess this virtue in equal degree, and its loss or absence results in conditions in conformity therewith.

To the physician who takes pleasure in the work of his choice, who is looking for returns from standpoints other than the purely financial, the pardonable pride that comes to him—when he is conscious of good work performed—is the strongest element that contributes to his success.

The medical profession is admittedly a calling that demands profound knowledge and sound and mature judgment, and exacts a certain degree of preparatory work that counts as preliminary to a great undertaking—such as is the study of a profession. Natural talent may go far towards fitting a man for any calling, but no talent can take the place of a thorough education for a profession in which such a large field of knowledge is to be mastered and such important judgments are to be constantly and promptly formed. That this high opinion is not universally shared is evidenced by a conversation held recently with the president of a medical college, in the course of which he remarked that he considered any man prepared to comprehend the study of medicine as taught to-day whose education qualified him to enter a high school.

I think it will be acknowledged by every one not biased by selfish motives or deluded by expected financial returns, that an institution with aims so low and with so little realization of what ought be required of a man who is entering upon the study of this profession, is not fit to train men for the practice of it.

With the sole exception of those interested in the low grade commercial medical schools, no one will contest the statement that there is but one feasible and honest method of limiting aspirants to medical practice, and that is one based on educational qualifications.

When the Association of American Medical Colleges was organized seventeen years ago, we looked forward to an elevation of the standard of medical education; but instead of taking the lead, this Association, and many of the schools of which it is composed, have lagged behind the general demands of the profession. This is shown by the fact that the standard required by the Association is lower than that required by many of the State Examining Boards.

On the basis of educational requirement we may speak of three classes of medical schools: first, those which accept only well qualified candidates; second, those which began a career of good intentions and noble ideals, but, being dependent solely upon students' patronage, have been compelled to abandon their ideals in order to maintain an existence; and a third class which has no excuse for existing, having been organized for no other purpose than catering to the ignorant, indolent and vicious.

To the first class, those that insist upon proper scholastic qualifications—and there are such—unstinted praise is due. I would they were more numerous..

Those of the second class—the schools that have shirked their early ideals in the struggle for existence, and have found themselves driven to the wall and forced to accept any terms—we must extend our profound pity; their fate is not undeserved, however, for they should have been conceived of better stuff, should rather have foundered than have lost moral backbone and have become prostituted to lower aims.

To the third class we cannot even extend a thought of pity. They were conceived with criminal intent, their only motive one of sordid gain, their whole activity directed to scheming and seeking out methods to evade laws meant to bridle their iniquities. If—and such are the plans of this class—the laws of the State and the rules of the Association of American Medical Colleges can be evaded, the solution of their problem is at hand, and *carte blanche* is given for mustering in everyone, competent or incompetent, rich man, poor man, beggar man, thief.

The methods of evasion practiced with reference to preliminary requirements for admission to medical schools are numerous and ingenious. Some faculties accept credentials, so-called, which in reality would not prove their holders fit to enter a grammar school, much less a professional school. Some of even a lower order of moral tone have admitted students on credentials manufactured by themselves or which were known to have been fraudulently obtained. The most ingenious, though unscrupulous evasion, is in the establishment of a preparatory course of study—a "pre-medical" course, so-called, in connection with the medical college. This course purports to give a scientific training leading up to the study of medicine. The requirements for entering upon this course of study are primarily a cash deposit; the educational requirement is a silent factor, and the young man who has the cash at his disposal during a period of six years blossoms forth and lords it over his less fortunate fellows in the dual rôle of B. S. and M. D.

I am credibly informed that there are schools of this class which propose to give this instruction with a faculty, in the pre-medical course, consisting of one man, and I have seen one catalogue that bears out this information.

Think, gentlemen, of an institution with a faculty of one man in the preparatory course, and a faculty in the medical course proper consisting of men without any preliminary training as teachers and

whose only qualification for a position in the teaching body is the price asked by the management for a position on the faculty! These are the institutions that expect to maintain a medical college without any income except that of student's fees. Every one who has given the matter even superficial thought knows that a well-equipped medical college cannot maintain itself on this basis.

I would not have you understand me to claim that there are no pre-medical schools of merit in the land. There are a number such, and most meritorious institutions they are, but at present I have reference to birds of very different plumage.

As a matter of fact, however, it must be admitted that low grade schools exist more for the sake of granting diplomas than for the purpose of teaching medicine. And once this is known, a premium is put upon illiteracy, because it enables the man who is gifted with a paucity of brain matter to enter such a school, pass examinations, obtain a diploma, and go forth a full-fledged doctor of medicine, but a very, very poor specimen.

Competition may be life to trade, but it is death to medical schools that recruit their students from a small territory. Owing to the large number of the latter sort of institutions, and the inadequate number of students to properly support them, the struggle for existence has become intense; students must be had at any cost; they must be kidnapped—I might even say—and the study of medicine must be made attractive, easy, and not interfere too much with their occupations. A thorough knowledge of medicine is not essential for graduation. The secretary of one of these colleges says that the low grade schools are necessary in order to educate a class of men who cannot gain admission to the better schools—for practice in the country! Those of us whose medical experience is not limited to the cities know that if there is any place where thorough training is necessary to success, it is in the country, where the physician is so often thrown upon his own resources, and, unaided, must undertake and solve the most serious problems. It is here that the physician is looked up to as a guide not alone in medical matters, but in matters pertaining to the physical, moral and mental training of the young.

Were this college secretary's attitude the correct one, we might as well provide our curriculum with a sort of sliding scale covering the needs of the various student bodies: those intending to practice in the country—attend 2 years; those about to locate in cities of moderate size—3 years; those who are attracted to the large cities—4 years.

In addition to careful and systematic training, it is essential that habits of scientific and logical thought be required. Many students

are entering these schools every year, in whom these habits of thought are not formed. There is in them a lack of training and discipline which the purely technical character of the medical instruction will fail to provide. The elaborated products of years of study and experience, as propounded by the instructor, enter the ear of the pupil only to encumber and confuse his mind, untrained in habits of systematic, logical thought. Educators have for years seen the defects in these schools and have voiced their sentiments in vigorous terms. One of the foremost of these, David Starr Jordan, President of Leland Stanford University, says: "In America the professional schools have vainly tried to train men who have no foundation of knowledge or discipline; to make physicians and lawyers out of men with neither scientific knowledge or literary culture. This has failed and in its failure has brought all American professions, except engineering, into disrepute. The reputable professional schools demand, or will soon demand, a college education as a pre-requisite for entrance. No man with less training than this can do specialized work decently. The college course represents a degree of enlightenment and a kind of training without which professional success and usefulness are not possible."

We are all ready to admit that there are men, who, without this preliminary training, achieve distinction in our profession, for there are men strong enough and self-reliant enough to push ahead alone—men who are wholly independent of assistance in forming their lives. But these are few. The vast majority of us need, cannot do without, assistance, advice, encouragement and sympathy.

It would be ideal if all institutions of medical learning could be conducted by men of such high character that the only motive for their existence would be to educate students who are prepared to receive and comprehend the vast subject. This is required for the reason that during the past twenty-five years medicine has made more progress towards the exactitude of a true science than during all the preceding centuries. This means that the methods of study and teaching have undergone a radical change. The teacher no longer hands down to the student the experience of himself and his predecessors as a guide to practice, but inducts him into a thorough knowledge of the fundamental sciences upon which medical practice is based, training him in the methods of scientific observation and deduction; thus is he taught to meet his own problems, by an application to them of the principles, facts and methods of chemistry, physics, anatomy, physiology, bacteriology and pathology. One who is to pursue the study of medicine by such methods with profit must come to them with his powers of observation thoroughly trained.

The remarkable progress which has been made in recent years in our knowledge of the causes of disease, makes it especially important that the profession should consist as largely as possible of broadly educated, cultured men, to the end that we may realize the possibilities of preventive as well as corrective medicine.

The profession, expressing itself through the medical societies, medical journals, medical examining boards, etc., must compel the low grade schools to seek a higher educational plane. If the movement results in the extinction of 50 per cent. or more of the medical colleges in existence it will be for the good of the profession, for there are at least three times as many schools as are required to supply the demand.

It is because I would like to see every state society in the land take an active, earnest interest in these matters that I bring this subject before you at the present time, for I believe the time is at hand when the medical profession ought take a much higher place in the scientific world than it has hitherto occupied, and ought and can purge itself of many of the elements that have hindered its progress.

Legislation, through the efforts of the profession, is exacting a standard of qualification which, though far from adequate, is still a marked improvement upon the low standard or entire absence of such as hitherto maintained.

There has never been a time in the history of American medicine when the profession was so well equipped to deal with this important subject, as at present. The reorganization under the direction of the American Medical Association has welded the profession in such a way that the efforts at uniform legislation will have the support of a united body of men representing every county in the United States.*

THE RELATION OF THE PHYSICIAN TO THE PRESS.

I wish now, gentlemen, to direct your attention to the consideration of a phase of the physician's work that brings him in contact with the general public, *viz.*: through the medium of the press.

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*The constitution and by-laws of the American Medical Association provide for a committee on "Medical Legislation" consisting of three members of the association, and one from each state, together with one each from the army, navy and marine hospital departments.

This committee has created the National Auxiliary Congressional and Legislative Committee consisting of one physician from each county of each state; these gentlemen are appointed by the committee, on nomination by the president of each State Society, and it is their duty to bring matters of pending legislation referred to them to the attention of the medical profession and the people of their respective counties, and secure desired action thereon.

Thus far the work done can hardly be considered other than a preliminary

An individual may make use of the daily press in one of several ways: by open advertising in the columns set apart for that purpose; by giving opinions in the form of open letters; by interviews, and by anonymous communications—such as editorials and reports of occurrences supposed to be of public interest.

Can the physician avail himself of any of these means of communication with the public?

There is an unwritten law, held sacred by the profession, which forbids our using the advertising columns for any purpose. But if a member of the profession be held in contempt for open advertising, with what scorn should we look upon the man who conceals his advertising by having an account of a remarkable operation reach the newspaper through a friend, or, as has occurred in this city—have published in every daily paper, morning and evening, English and German, a glowing account of his qualifications as a surgeon?

This publicity given to opinions and doings of various members of the profession, characterized by a distinguished physician as "newspaper doctors," is certainly a great evil, one out of which no general benefit is derived, and one that stultifies the whole profession. It is true that greatness occasionally comes unsought; when involuntarily accorded a physician, his brethren will at least find no fault, but when he voluntarily puts himself in the public eye in a manner that must be considered immodest and improper, we must feel it an offence. This is a matter concerning which there may be some honest difference of

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drill, and yet it has secured the appointment of Dr. W. C. Gorgas as a special representative to the Panama Canal Commission.

Work has also been done in furthering the passage of a "A Bill to increase the Efficiency of the Medical Department of the United States Army," and to secure "An Appropriation of $400,000 for a General Hospital for the Army in the District of Columbia."

The committee has interested the medical profession in behalf of "A Bill for preventing the Adulteration or Misbranding of Foods or Drugs and for regulating Traffic therein, etc," which bill also establishes the United States Pharmacopœia as the legal standard of drugs and chemicals and makes it the business of the National Government to enforce that standard.

Attention has also been directed by the committee to the fact, that, while there are about 350 lawyers in the National House of Representatives, the medical profession has not one representative, and that there are but two physicians in the Senate, and urges the importance of systematically looking after representation in our legislative bodies, both State and National.

Perhaps one of the most important features of the committee's plan is to secure uniform medical legislation in the different states, and, if present plans mature, I believe we may look for the accomplishment of this in the near future.

opinion, and for this reason I find it difficult to define the proper relation of the physician to the press with due regard to the dignity of an honorable profession. There are, however, some things to condone, others to condemn in the methods and subjects used for public display.

Matters of sanitary and scientific interest are demanding more than ever the attention of the public, and especially if legislative action is sought, would they seem to demand some source of communication between the profession and the public, more particularly, possibly, by medical men occupying public positions. Doubtless the physician in private practice may accomplish some good by discussing such subjects also, nor would there be any impropriety in attaching his signature to such a communication.

Medical men are frequently called upon by representatives of the press for opinions on matters of public interest, and it is proper that the public should have the benefit of the physician's knowledge.

In these interviews, as a rule, the same purpose will be served by giving the opinions of a "well known physician," or a "prominent physician," as by attaching the individual's name to the article, and we are thereby relieved of the unpleasant publicity.

"But concerning themselves whose countenances, thinkings, sayings and doings are not of the least public importance, physicians should not court publicity; or, if they do, should be classed with the other medical advertisers, with Lydia Pinkham and her brethren."

I will concede but one condition in which a communication by interview may be admissible: where an interview is granted a physician who, by reason of special study, is qualified to discuss authoritatively a given subject to which he has devoted himself. In such case his name, attached thereto, lends the weight of authority. In conceding even this you can readily see the avenue of abuse that is laid open.

There is one other way in which the physician can serve the public through the daily press, and influence public opinion on many important subjects, and that is—through the editorial columns. Every paper of importance should open its editorial columns to the medical profession, not indiscriminately, but should have a medical man of ability on the editorial staff.

Next to that of the clergy, the medical profession and its members individually are probably accorded the greatest degree of popular interest. It is but natural that this should be the case. Reflect for but a moment upon the speed with which the news of a friend's illness spreads, and the lightning rapidity with which the illness of one whose name—by reason of his prominence—is familiar, is scattered throughout the land. The general public, while it may have a morbid interest

in a daily exposition of the symptoms existing, understands them not, but that does not deter the news-gathering interviewers from obtaining opinions from wise medical Solons. Now, let me ask, do reputable physicians treat by correspondence? Much less—can they diagnose and talk intelligently about cases when brief telegraphic despatches are the only information given? Why, I ask, seek glory in parading one's name—or allowing it to be done—in the newspapers, by voicing opinions—learned, and otherwise—upon questions propounded by an interviewer who has no knowledge of the subject, questions that of themselves are usually distorted and involved, and have previously passed through the "higher criticism" of the recorder many miles away? Paper is tolerant, as the Germans say, and so long as a physician will lend his tongue and a reporter his ear, the stuff will continue to be ground forth for the benefit of the public. Our invalid citizen may live thousands of miles distant, but this is no barrier—verily distance even seems to lend enchantment—possibly because there is less danger of authoritative contradiction. And so our fellow practitioner proceeds glibly to answer questions for publication, and to act the sage in matters not of his knowledge and brought to him already distorted by the wild flights of the reporter. Must this not end in throwing a mantle of ridicule and discredit over all such stuff?

Take, for example, the wise dissertations of several of our fellow practitioners upon the ailment of one recently prominent in the public eye. During the last illness of the late lamented Pope, several physicians of Milwaukee allowed themselves to disgrace the profession by talking nonsense to a reporter and having the satisfaction of seeing their names in print in an article entitled "Doctors Talk on Pope's Vigor." One says, "But it is wonderful that so small a man should be able to withstand what he has been able to conquer." Another says, "He is one of those thin, wiry men who can stand much." Still another, "No, his small stature is rather in his favor than against it." The latter also tries to impress the public with his superior knowledge by saying, "But I think Dr. Lapponi failed in his first diagnosis." It does not concern us whether large or small men are possessed of more vitality, but with what ridicule these opinions must have been received by the public. Nor do we need to discuss Dr. Lapponi's diagnosis, for certainly his diagnosis would be of more value at the bedside than would be an opinion formed from meagre telegraphic notes thousands of miles distant.

The opinions given were conceived in ignorance of facts, their publication enlightened no one, and the rot they contained reflected sadly upon the good sense of their authors.

The thoughtful, honest, sincere physician always feels hurt when he finds that some thoughtless one has, from greed for notoriety or other base motive, allowed himself to talk for publication on some trivial matter, or of his own work or doings.

Is it too much to hope that, if to the voice of the individual the influence of societies like this be arrayed against the "newspaper doctor," he may be made so odious, not only in our own profession, but among journalists and the community at large, that we will hear less of him, and that the public will relegate him to an "innocuous desuetude?"

MEDICAL EXPERT TESTIMONY.

I have almost exhausted the limit of time allotted me, but desire to present very briefly another matter—a serious abuse that menaces professional standing in the community and casts a doubt upon professional integrity. I refer to expert testimony.

No position in which the physician is placed has called upon the general profession as great a degree of odium, by the intelligent public, as has the giving of expert testimony. The very fact of posing as one ever ready to mount the stand in the capacity of expert has discredited many a physician in the eyes of the public. That there is foundation for such grave criticism, and that the medical profession is responsible must be admitted, but I cannot allow them to shoulder the whole burden of responsibility.

It is a case of the tempter and the tempted. Personal rivalry or antagonism does at times enter into an argument of this character, but yet it is the high fee offered as bait that flatters the physician and induces him to sell his conscience to the highest bidder; a double crime this, of bribery on the part of the attorney, and perjury in the case of the physician. This unscrupulousness of both parties forms a combination that makes possible the utterance, upon the witness stand, of medical evidence that is simply appalling in its distortion of facts and its lack of regard for the plain truth. It is this combination that stultifies the physician's good instincts, and prostitutes his integrity to the basest of aims.

Lawyers have come to believe that they can hire, for money, a medical man to testify to anything. Who of you, gentlemen, has listened to the testimony in a case for malpractice, a case for damages against a corporation, or a murder trial, and not felt ashamed of his profession? I do not want to be understood as meaning that all expert testimony is of this nature, but we have all heard statements made on the witness stand that could not be attributed to ignorance.

Allow me to quote a few cases from the court records to illustrate

the gross ignorance or deliberate falsehood of medical men on the witness stand. One witness testified that he had treated a number of fractures of the femur, some oblique and others transverse, located from an inch or two above the knee to as near the coxo-femoral articulation, and in all intermediate portions of the bone, and in every case had achieved a perfect result without deformity or shortening.

Another testified that it was almost, if not altogether, impossible for a strong man to dislocate by a violent wrench of the arm the shoulder of a woman sixty years old on account of its protection by muscles and ligaments.

Still another testified as follows: "It is my opinion that the attachments of the plaintiff's liver have been violently separated. I think that you could by force, by outward violence, so rupture the attachments of the liver as to permit the liver to fall away from its normal position some inches without necessarily any rupture of the blood vessels except the capillary hemorrhage. The liver as a whole is practically at those times on the left side of the body, not entirely on the left of the median line, but the major portion of the substance of the liver seems to be on the left side." In this case the plaintiff was able to be in court and give testimony in his own behalf.

I leave you to judge as to whether these were cases of ignorance or wilful mis-statements.

What remedy can be invoked against this evil?

The plan that has been so frequently suggested by writers on this subject is that of adopting the system in vogue in certain parts of continental Europe, that is—the appointment of state or government experts who constitute a board to pass upon all matters that are brought to the notice of the court. The European method of jurisprudence differs, however, so materially from our own, that, as I am reliably informed by able attorneys, such a plan could not—because of the conflict with our national laws—be adopted in this country. Even should the state desire to appoint a court of medical experts, the defendant in any action would still have a right to present his own medical witnesses, and, a just hearing being guaranteed, the experts would again hold the floor and a battle royal could not be averted.

Another objection to the appointment of official court or state experts—even were it not antagonistic to our law—is the political bias that would naturally dictate such an appointment, and when political fortunes are the basis of such action, then must we fear that the aims of justice will not be well served.

The evil of the present system consists in the fact that there are three classes of experts encountered in court: first, the man with an

abundance of brain, but a paucity of honor and honesty; second, the man of small brain, but of honest intent; third, the man of brain coupled with honesty.

A leading lawyer of this State gives his opinion of experts as follows:

The classification of witnesses made by the late Judge Sloan into positive, comparative and superlative liars, d—n liars and medical experts—was suggested by the fact that too many medical men on the stand are confused as to their function. They infer that they are hired to swear to an opinion; that the opinion need have no relation to fact as long as it can be plausibly supported by cheap logic; that they are relieved from the obligation resting on lay witnesses, and have the same freedom that a lawyer is supposed to have in argument.

The scandal arising from medical testimony comes not from the fact that medical experts disagree, but from the circumstance that they so uniformly disagree and that the line of cleavage co-incides with employment. This has led to the belief that medical experts can be found to support any theory, and that they fancy that the oath imposes no obligation upon them for the reason above stated; that they are not subject to the pains and penalties of perjury, since they are not testifying to anything tangible. Consequently, as Butler says:

"They like watches go,
As they are set, or fast or slow."

Perhaps constant recognition of this circumstance—that he is called upon to swear to a fact—might tone down some of the wild and woolly testimony given by medical experts.

It is a tremendous blunder to allow every person with the title of "doctor," selected indiscriminately, to pose as an expert and to have his opinion placed beside that of men of real worth and character, and be given equal prominence and consideration by a jury. This plan is bound to work a hardship to one party in the action. Experts ought be chosen from the ranks of those who are really expert, who have qualifications that entitle them to pass judgment upon matters that are judged actionable.

Such a plan would, at any rate, disqualify the grossly ignorant from giving opinions totally at variance with generally recognized facts.

The aim of the testimony of experts who pose as specialists ought be, in addition to its applicability in a given case, the accumulation of facts which can serve as a basis for future action in similar cases, just as the rulings of higher courts are precedents by which the lower courts guide their action. The great mass of imperfectly observed

facts, absolutely dishonest statements, and unwarranted deductions that are made in the courts, do certainly not further the object of scientific inquiry nor do they add anything to the storehouse of medical information.

Is there a remedy for this evil?

Yes, one only, and that is honest action, and a love for truth so dominant and powerful that it impels the physician to weigh and measure to the utmost every fact before it is given utterance. I wish I could convey to you some adequate idea of the enormous amount of harm that is daily done the medical profession, by failure to observe this injunction.

When, in the gradual evolution of our social and moral life, honor and a clear conscience become virtues to be striven for by all, then may we look forward to a time when expert testimony in its present discredited state will be replaced by a feeling of respect and a sense of security. And when a sentiment has been cultivated in the profession tending toward the recognition of these principles as establishing a basis of conduct, then will it be impossible for a physician to sell his scientific heritage and still retain a post of respect and decency among his professional brethren.

Gentlemen: I have made no effort to say the final word on the subjects upon which I have briefly touched. To treat them exhaustively I would have to crave your patience for more time than I would willingly occupy; but my endeavor has been to bring to your notice some of the evil influences that are depriving the medical profession of the fruit of its well-earned, unselfish labors—recognition of honest work by an honest public. It is before an organized body, such as for the first time in our history is represented here to-day, that matters of this character that concern every physician—to whatever school he may belong—ought be brought for their earnest consideration.

Feeling so deeply the great import of this matter, I have sketched abuses known to exist in various parts of our country. I desire to reassert a statement with which I introduced my remarks, assuring you that I am actuated by no personal prejudice, nor led by an unworthy motive, and that, if I may have particularized certain instances, it was in order to bring the lesson home with all the emphasis at my command. My criticisms, believe me, are impersonal, and have a bearing upon existing conditions; they are absolutely without bias other than that arising from a great desire for the advancement of the rank and file of the profession.

There are other subjects equaling in importance those discussed, but which, by reason of lack of time, could not be treated; I refer to

such matters as contract medical service, commissions, commercialism, graft and the like.

If I may be permitted the word, I would say that matters of this kind are rightly within the sphere of the incumbent of the position I am honored in occupying and I trust my successors may find them, as I have found, to be worth their time and attention.

The medical profession can, as time goes on, abrogate the evils from which it is suffering; but this reformation, most devoutly to be wished, cannot be accomplished by wishing—cannot be accomplished by grandiloquent speeches or paper resolutions—can, indeed, be accomplished in only one way, namely, by wise, resolute work, and by thorough organization and concerted action among the members of the profession.

Discouragement may come to us at times because reforms are slow and ponderous movements, but the victory of right will ultimately prevail.

As I look back upon the century of discord that has divided the schools of medicine, I cannot escape a feeling of keenest regret at reflecting upon the loss sustained in this lack of professional harmony. When all is said and done, we physicians—if we be honest—and to whatever school we may belong—must and do realize that our ultimate aim is the same. Though it be not upon the lines of therapeusis, there is a common basis upon which we may all place our standards, that of a desire to aid humanity—whatever be the immediate means employed; this being undisputed, is it too much to say there will come a day, in the not distant future, when this factional strife will be forgotten? Would that I were gifted with prophetic foresight, and could interpret rightly the dawn of a better understanding that is already manifest in the horizon of our medical progress. One bold leap has already been made, and those far-sighted men who planned this grand reorganization of our medical social life, brought into it a code that no honest man can refuse to accept. And there are those of other schools than ours who have accepted the call, and more will follow. Then is it promising too much to say that the strength of a united medical profession will—in our own lifetime—be realized?

THE BORDERLINE BETWEEN MEDICINE AND SURGERY.*

THE ADDRESS IN MEDICINE.

BY J. C. WILSON, M. D.
PROFESSOR OF MEDICINE, JEFFERSON MEDICAL COLLEGE, PHILADELPHIA.

GENTLEMEN, MEMBERS OF THE MEDICAL SOCIETY OF THE STATE OF WISCONSIN:

It is fitting for me to express to you my appreciation of the honor you have done me in asking me to deliver the Address in Medicine upon this occasion. It is a pleasure to me to be with you in acceptance of that invitation, to take part in your proceedings, to have the opportunity of meeting old friends and making new ones among you and to wish you face to face much and lasting scientific gain and professional good fellowship in your reorganized association.

I trust it will be agreeable to you if I take for my subject one of the great general questions that have long engaged the attention of the profession, and now interest us more than ever. That question relates to the border line between medicine and surgery. Like all disputes about boundaries, it is of intense interest to those concerned, and becomes more vital and absorbing as its consideration proceeds. The question in this case does not involve the ownership of a strip of territory, the flag under which a certain number of individuals shall live or the government to which they shall pay their allegience and their taxes. It involves the happiness, the health, even the life of multitudes of human beings. On the one hand lies medicine bound by an ancient and respectable conservatism and traditional faith in drugs; on the other surgery, aggressive, radical and fearless in its reliance upon a technic almost without flaw. Lister, in laying the foundation of the New Surgery builded better than he knew. He not only revolutionized his art but he also widened its scope, and the widening process has continued to this day. It has been an armed invasion and medicine has had to yield, now a little and then a little until much has been given up with the greatest advantage to all concerned, especially the patient. The most interesting thing about it is that the concessions have been willingly made, and the only dispute among well informed medical men now is at to what class of borderline

*Delivered at the 58th Annual Meeting of the State Medical Society of Wisconsin, Milwaukee, June 23, 1904.

cases are still to be managed by the medical clinician with a reasonable hope of success, and what cases are to be handed over to the surgeon and at what period in their progress the transfer is to be made in the best interest of the patient, for it is his welfare and his alone that is to be considered.

The very fact that there are still unsettled points in the matter is my only excuse for addressing you upon the subject, for I shall have to say many things with which you are all familiar. But if we talk long enough and earnestly enough about this subject, presently the ultra-conservatives will hear us and listen to us, and lives that are now being lost will be saved. The matter will never be settled till every graduate of medicine who has the license to practice will be able to make a pretty fair differential diagnosis between the belly-ache that can be cured by castor oil and paregoric, and that which requires cold steel and the ligature, and requires these therapeutic measures without loss of time. I may be permitted to add that the argument in favor of handing cases over to the surgeon comes with a better grace from the medical side than it would from the surgical side and is more likely to be listened to, and that is another justification for my taking a surgical subject as the text for the address in medicine. I do not want to be misunderstood. There is and there will continue to be plenty of work for those who devote themselves to clinical medicine, and if the drug shop becomes less important as the operating room becomes more important, each will always have its proper place in the relief of suffering humankind. The thing for us to determine now and at every period is the limitations of our art. First, the limitations of the art itself. We must learn to recognize the diseases which tend to recovery and require no active treatment of any kind and those which tend inevitably to death and are to be managed by palliative measures alone. Then we are to recognize the limitations of medicine as contrasted with surgery, and where drugs are useless and the knife alone can help. That is, I say, one of the great problems of medicine to-day. Its solution calls primarily for the most thorough knowledge of pathology and the natural history of disease, and secondarily for the highest skill in diagnosis. These are the branches to which the general practitioner should especially devote himself, since it is to him and not to the operator that the doubtful cases first apply.

Meanwhile the surgeon continues to improve his technic as he adds to his experience, and cannot suffer his hands, either the right or the left, to forget their cunning.

Concerning the maladies that clearly belong to the one or the other department, there is neither doubt nor question. We all agree

that malaria and pneumonia are to be treated by the physician, and that stone in the bladder and empyema cannot be cured by drugs, but only by operation. How essential then that we distinguish between urinary fever and an ague; between the dulness of a consolidated lung and the flatness of a pleural effusion. But we are not all of one mind as to the medical or surgical treatment of sero-fibrinous pleurisies and appendicitis. And there are many other conditions concerning which there are radical differences of opinion. The truth here as elsewhere is not fixed and final, but the sum of our experiences up to the present time. What is true in medicine in one decade is by no means always true in the next. It behooves us, therefore, to free ourselves from the trammels of tradition and authority and accept only those results that have been attained by the precise methods of scientific medicine. And what method of study can be more exact than that of the operating room? Every properly conducted surgical operation in a doubtful case is an experimental research in pathology and diagnosis and far more instructive to the physician than an autopsy—not to speak of the interests of the patient. The medical clinician—the internist, as he now calls himself—who aspires to be skillful in diagnosis, must learn many a lesson of humility in the dead house and the operating room. Fortunate are those who find in the occasional divergence between the clinical diagnosis and the anatomical diagnosis, not mortification, but instruction. We realize then that the surgeon may become necessary not only in treatment, but also in diagnosis, and that the exploratory incision is sometimes much more than justified—in fact, an imperative duty, as for example in sudden intense abdominal pain with muscular rigidity.

The borderline cases comprise diseases of the organs contained in the great cavities of the body, cranial, thoracic and abdominal, and the conditions are manifold, varying from displacements of viscera otherwise normal, through a long list of inflammations, ulcerations, transudates, exudates, abscess, calculous formation, internal strangulations, occlusion or rupture of hollow viscera, to neoplasms of every kind. I speak of these as borderline conditions because some of the cases recover under one method of treatment, some under the other. Unfortunately some do not recover at all. Whether or not any given case is to be treated by medicine or the knife does not always depend upon the diagnosis of the disease. It very often depends upon a much finer and more difficult diagnosis, namely, that of the precise condition caused by the disease. Peptic ulcer frequently recovers under medical treatment, often apparently under no treatment whatever, yet there are cases which resist all methods of treatment except operation, by

which they are promptly and permanently cured. There are cases of epigastric pain, gastralgia that nothing will cure except drainage of the gall bladder, and of lumbar pain that only the anchoring of a floating kidney will relieve. And there are still many practitioners to whom the surgical treatment of such otherwise unmanageable cases never suggests itself, and others who refuse to act upon the suggestion when it is made to them. Two things stand in the way of decisive action in many of the cases. First, the fact that recovery does take place under drugs, as in gumma of the brain, and one inclines always to delay and hopefulness. The other is the recurrence of periods of latency which simulate recovery, as in cholelithiasis. There is a formative period in every case of gall stone disease wholly unattended by symptoms, and in almost every case there are periods of latency of varying duration between the paroxysms of colic, jaundice and the like. In fact, a large proportion of the cases found at autopsy give no history of active symptoms. Are we then to regard periods of quiescence as cures, and ascribe the favorable condition to the chloroform, or sodium sulphate, or olive oil that may have been given, or to a cure at Karlsbad? Or are we to forget that cholelithiasis, even though latent, is a constant menace to the health, even to the life of the individual?

It is nearly twenty years since coeliotomy for the relief of intestinal perforation in enteric fever was first suggested. At first the operations were few and far between and mostly unsuccessful. Then came a time when the alert physician turned over his cases of perforation to the surgeon promptly, and a fair proportion of them got well, and now not to call the surgeon promptly is rightly considered an almost criminal neglect. I venture to predict that the time will come when the probable diagnosis of biliary calculus will constitute the indication for prompt operation, and that by such a course the sum of human suffering will be greatly diminished. The same prediction may be safely made in regard to cases in which recurrent or persistent hematemesis or other symptoms of gastric ulcer occur, and in stenosis of the pylorus.

The limits of this discourse do not admit of the systematic consideration of the borderline cases concerning which there are differences of opinion. But I may be permitted to refer briefly to certain of them.

Cerebral Tumors and Cysts.—It is to be remembered that syphilitic tumors alone are amenable to medicinal treatment. The solitary tubercle may become quiescent and undergo retrogressive changes. The relief which sometimes follows the administration of

the iodides in other neoplasms is partial and transient. Mills has recently advocated operation for the removal of brain tumor in carefully chosen cases in a most important paper. He does not regard the high percentage of failures as a valid argument against operation, since without it the outcome is necessarily fatal, and "with more exact localization and more precise craniocerebral topographic methods and with more perfect surgical technic, the percentage of successes has been and will be increased." The successes of Macewen, Horsely, Keen and others justify this view. Fibromata, encapsulated fibrosarcomata, inert gummata comprise the favorable cases. Other new growths have been successfully removed. The diagnosis of the nature of the growth cannot be made beforehand with precision. Mills lays stress upon the exact localization of the tumor and the mapping out of the various fissures and lobes well in advance of the time of operation. He refers to cases in which the X-rays have proved of value in determining the position of the tumor.

Exophthalmic Goitre.—This formidable affection is a borderline disease, over which a keen controversy is being waged. Those who advocate treatment by drugs and other measures purely medical have little cause to be exultant at their results. The very profusion of the therapeutics is sad testimony of failure. Digitalis, iron, aconite, veratrum viride, strophanthus, belladonna, opium, thyroid and thymus extract, galvanism, rest, have some improvements, few cures and overwhelming failures to their account. The best results are to be credited to surgery, and these are far from satisfactory. Here also the plenitude of procedure tells against the assumption that any one of the operations is essentially curative. Exothyropexy, the ligation of the arteries of the gland, division of the isthmus, the removal of one lobe, and bilateral resection of the sympathetic ganglia are all advocated. But the results are far from satisfactory. The patients bear general anesthesia badly, and operative and post operative deaths are frequent. The goitre is sometimes cured, but the disease only occasionally.

Much work is yet to be done ere we shall be able to decide whether exophthalmic goitre is to be regarded as a medical or surgical disease.

Lung Surgery.—Upon this subject two important communications have lately appeared, namely, that of Ricketts of Cincinnati and that of Willard of Philadelphia. Some of the conclusions of the former are most interesting and suggestive. He holds that the success which has attended operation upon the lung in emergency cases warrants the application of the same methods in selected cases if

modern surgical principles be employed, and that lung surgery may be perfected and made more aggressive and general, but that more definite knowledge of conditions and symptomatology is necessary. He believes that the bony chest may be opened for the exploration of the lung with as little danger as the abdomen, cranium or joints; that foreign bodies in the lung or bronchi, when causing serious symptoms, should be removed; that cysts should be drained; that abscesses of any character and any location in the lung should be found and opened, and that gangrene of the lung demands most radical surgical measures, such as opening the chest, drainage and the removal of all necrotic tissue. He even advises the opening of the bony chest in severe and protracted hemorrhage due to pulmonary tuberculosis, and the application of pressure by forceps, gauze or other means. The radical position taken by this writer is extreme, but it is most suggestive and important as showing the drift of surgical opinion. His views in regard to abscess and gangrene deserve especial consideration. Willard's paper on the Surgery of Tuberculous Cavities of the Apex of the Lung is scarcely less radical. He states that pneumonotomy may be employed as a palliative in haemoptysis, and predicts that with an improved technic tuberculous foci (in the lung) will in the future be removed as we now eradicate tuberculosis in joints, and other tissues.

Pleural Effusions.—There is no question concerning the treatment of purulent effusions. Prompt incision and drainage with resection of ribs when necessary constitute the treatment of empyema. In regard to sero-fibrinous pleurisy, there is, however, much diversity of opinion among practitioners. Fifty years ago Henry I. Bowditch, to whom with Merrill Wyman we owe the aspiration of these effusions, suggested its employment "in any case of even moderate effusion lasting more than a few weeks and in which there should be a disposition to resist ordinary modes of treatment."

The ordinary methods of treatment until the last quarter of the last century consisted in the administration of potassium iodide and repeated blistering of the affected side of the chest. About that date the so-called rational plan began to be practiced. This consisted in a great reduction in the daily amount of liquids ingested. The diet was restricted, in the absence of fever, to meat, dry bread and eggs, and not more than ten ounces of liquid in the form of water or milk. In addition to the dry diet, as suggested by Matthew Hay, active liquid purgation was brought about by magnesium sulphate in doses of half an ounce to an ounce and a half in concentrated solution an hour before breakfast. The vapor or hot air bath and occasional hypodermic injections of pilocarpin were used.

Diuretics, as digitalis, squills and potassium acetate, were also employed. Potassium iodide and the salicylates likewise entered into the therapy. Under this plan, effusions of moderate extent were slowly absorbed. Large effusions were aspirated. There was a very general belief that tapping should be avoided as far as possible on account of the danger of causing the rapid development of pulmonary tuberculosis. But there were teachers, and I am happy to be able to say that I was among them, who held that the compression of the lung and the peripheral atelectasis caused by the effusion constituted a real danger, while the influence of the withdrawal of the fluid in hastening phthisis was only a hypothetical danger, and, therefore, advised early aspiration. In 1902 Delafield of New York published a most important paper, based upon the analysis of 200 cases, in which he demonstrated the advantages of early, and if necessary, repeated aspiration, and strongly urged that procedure. Delafield regards drugs as unnecessary.

The Surgery of the Stomach.—The remarkable and epoch-making work of Robson and Mayo have revolutionized the treatment of chronic diseases of the stomach. Ochsner of Chicago, believes that ultimately "stomach surgery will consist chiefly of operation for gastric ulceration or one or more of its various sequels, hemorrhage, perforation, adhesions and the like." But operation for the relief of those sequels will not be so frequent as at present because of the growing favor of the early operative treatment of ulcer. Gastroenterostomy in peptic ulcer of the stomach and duodenum and non-malignant and malignant pyloric stenosis, has yielded results as brilliant as any procedure in modern surgery. With reference to diagnosis in chronic as well as in acute cases in which the cause of the symptoms is obscure, the necessity of exploratory operation must be recognized. The aphorism, "The risk of operation is definite, the hazard of delay is immeasurable," is applicable to cases of both kinds.

Surgery in Diseases of the Liver, Gall-Bladder, Biliary Ducts and the Pancreas.—The book of Kehr and the recent papers by the Mayos, Murphy, Robson and Brewer should be studied by every medical clinician. It may be accepted as final that no gall stone can be dissolved in situ; that when faceted gall-stones are passed by the bowel, there are others remaining in the gall-bladder or bile-passages; that the relief following purgation and other measures of internal drainage and various "cures," such as that at Karlsbad, does not constitute a cure, but merely a period of latency; that repeated attacks of biliary colic mean progressive traumatism of the structures involved, adhesions, the danger of perforating lesions, cancer and pancreatitis, and that in a word, cholelithiasis is a surgical disease.

The subject of the treatment of cirrhosis of the liver by operation is not yet wholly settled. So-called hypertrophic or biliary cirrhosis, with enlargement of the liver, jaundice, irregular fever, and without ascites, is not benefited by drugs and may in some cases be relieved by drainage of the gall-bladder. Atrophic cirrhosis with ascites has yielded favorable results in more than 40 per cent. of the reported cases treated by Talma's operation or one of its modifications. There is reason to hope that those operations performed earlier than hitherto and in selected cases, may yield much more satisfactory results.

Acute and chronic indurating pancreatitis have only in recent years attained the importance of recognizable nosological entities. The difficulties in diagnosis and the hopelessness of relief by drug treatment place these affections in the category of surgical diseases. Especially in the acute form which is characterized by sudden onset, collapse, pallor, feeble and rapid pulse, severe cramp-like pain not relieved by vomiting, abdominal rigidity, tenderness, an exploratory operation is indicated by the symptom-complex, in which fatty stools, glycosuria and irregular fever are of secondary importance. The list of successes following operation is slowly increasing.

Appendicitis.—We see much less of late in the journals upon the medical treatment of this disease. Most of the surgeons hold, and the medical men are now generally inclined to the opinion, that the infected appendix had better come out. The danger of abscess or general peritonitis may be imminent in any case. There is no medical treatment, and most of the apparent recoveries have been periods of latency to be followed by recurrent attacks. Obliterating adhesions may bring about a lasting cure.

The borderline between these two great fields of activity, medicine and surgery, never too sharply defined, advances steadily in the direction of closer observation, exacter knowledge, greater precision of methods and more beneficent results, and the proven facts of medicinal therapeutics are steadily becoming more reasonable and more secure.

ORIGINAL ARTICLES.

TRAUMATIC ASPHYXIA.*

BY F. SHIMONEK, M. D.
MILWAUKEE.

A case published under the above title by Drs. Beach and Cobb in the *Annals of Surgery,* April, 1904, and the editorial comment in the *Journal of the American Medical Association,* June 11, 1904, have prompted me to make the following report of a case of traumatic asphyxia.

The case occurred in my practice some 25 years ago, and in making the report I am obliged to draw wholly upon my memory. The patient's condition, however, was such that nothing could efface the vivid impression it made upon me, and the details are still before me. The moment I saw the colored picture of Drs. Beach and Cobb's patient in the *Annals,* the face of my patient appeared before me as if it really were his picture, and since there are "only few cases of the kind in which recovery has taken place recorded in literature," I feel it incumbent upon me to record my experience.

It seems to me, and I am apparently supported in the belief by the very prompt recovery of my patient, that immediate venesection, in vigorous cases at least, is more urgently called for than artificial respiration and inhalation of oxygen as advised, for the condition of venous stagnation must be due to the inability of the right heart to empty itself, judging by the forcible arrest of respiration, the excessively laboring heart, and the intense venous congestion.

My case was that of a young and very robust man, whose previous health had been normal in every particular. He had been engaged by a house mover to assist in moving a building. The patient's part of the job consisted in looking after the rollers and this compelled him to crawl beneath the floor very frequently. In one of these explorations a part of the floor sagged, caused by the breaking of a joist, the end of which dropped on his back and pressed him to the ground. Fortunately he was immediately discovered in this perilous situation and while he was being extricated a messenger had been dispatched a distance of two blocks for me. I saw him about five minutes after he was released from the vise; he was unconscious, breathless, his eyes were intensely congested and protruded from the orbits; his face was so intensely congested that he appeared more like a colored than a white man; his lips were greatly swollen, the mouth open, and from it protruded his greatly swollen and black tongue. The pulse was slow and strong, the heart was beating against the chest wall with great vigor, pointing to the great obstruction against which it was laboring.

It instantly occurred to me (although I had no precedent) that to save his life the right heart would have to be relieved forthwith of the immense burden, then to institute artificial respiration if it did not promptly respond to the emptying of the venous system. This

*Read before the Milwaukee Medical Society, June 14, 1904.

plan was promptly executed by freely opening the median basilic vein. The blood flowed in a large black stream, and almost immediately the color of the patient's face began to lose its blackness, the protrusion of the eyes soon lessened, the heart seemed to be laboring less violently, and the pulse became softer; by the time one quart of blood had escaped, respiration commenced, shallow at first, but soon normal, and in a short time consciousness returned, although the patient was a little dazed at first. In the course of about an hour circulation became equalized, and the patient's mind clear. The following day he came to my office afoot. With the exception of a little cough and some mucous râles in his chest his health was fully restored, and he resumed work.

There is no doubt in my mind that the prompt and copious venesection saved his life. Artificial respiration and inhalation of oxygen should be used as auxiliaries to prompt venesection. It is not often that one has oxygen on hand, nor is it always readily available in time to be of service, but after the great pressure in the venous system is reduced, then—if it seems necessary—both of the methods might be advantageously utilized.

ARTERIAL SCLEROSIS.*

BY J. S. WALBRIDGE, M. D.
BERLIN, WIS.

We are all familiar with the following picture: A man or woman, generally past middle age, is suddenly seized with motor weakness, faintness passing into unconsciousness and coma; stertorous breathing ensues, flapping cheeks, muscular relaxation and indications of a one-sided paralysis. We examine, look solemn, and say: "apoplexy"—ruptured blood vessel in this or that location in the brain. This is what we learned in the schools and what I did not unlearn until within a comparatively short period.

The statement made by a professor in the Post Graduate School in Chicago that 90 per cent. of the above cases were due not to rupture of blood vessels, but to thrombosis, caused me to reconsider my views on this subject, with the result that my ideas have been very materially changed. As the condition known as arterio-sclerosis is the condition most commonly present in both cerebral hemorrhage and thrombosis, I wish to refer to it briefly in order to bring out some ideas of treatment of what we might term the pre-apoplectic stage.

I wish to dwell somewhat at length as to the causes of arterio-sclerosis; very briefly as to its anatomical characters, and also refer briefly to its symptoms and treatment.

Arterio-sclerosis is, in short, an overgrowth of the connective tissue of the arterial coats, followed by calcareous depositions. It is an accompaniment of old age along with gray hair, arcus senilis and

*Read at the Green Lake-Waushara County Medical Society, Berlin, April 28, 1904.

prostatic enlargement; it is also an expression of the natural wear and tear to which the tubes are subjected. Longevity is a vascular question, and has been well expressed in the axiom that "A man is only as old as his arteries." To a majority of men death comes primarily or secondarily through this portal.

The time of life at which what may be termed physiological arterio-sclerosis begins, depends upon two things, *viz*: the kind of material which enters into the makeup of the arteries, and the amount of wear and tear to which they have been subjected.

The first of these, of course, means heredity, and when we find hard arteries in a man young in years, who has not subjected them to bad use, we know we have poor material, poor heredity. More commonly, however, arterio-sclerosis results from bad use of good vessels, and among the circumstances which tend to produce this condition are the following: chronic poisoning from alcohol, lead, gout and syphilis, etc. These are said to be causes, but just how they act is not clear. Over-eating is a cause which has been long considered important; the constant overfilling of the vessels as well as the waste material present in the blood must have a deleterious effect; overwork of muscles is another cause, acting by increasing peripheral resistance and raising blood pressure; renal disease is probably at times cause and at times result of arterio-sclerosis.

The arterial change may go on for a long time without causing kidney disease, but when it is once established the case becomes much more serious.

It has been figured out, by the Germans, I think, that in a case of primary arterio-sclerosis a man has about two years to live after his kidneys become affected; this is quite an important point to remember, for we have very little data on which to base our prognosis.

Morbid Anatomy: I shall say but very little in regard to the pathological changes. The intima, or inner coat, which should present a smooth internal surface, shows localized areas of thickening; these patchy prominences are yellowish white in color and are located near the orifices of branches. These patches increase in depth and area and on reaching an advanced stage their interior degenerates into granular material, the so-called atheromatous abscesses. Various forms are described in the books, though time will not permit me to refer to them.

The effect of arterio-sclerosis upon the physiologic functions and the pathologic and clinical results are of the utmost importance. The elasticity of the vessel walls is destroyed, the capacity for blood pressure diminished, the tendency to dilatation and aneurysm increased, the work to be done by the heart multiplied and its hypertrophy thereby insured.

The narrowing of the lumen of the vessels, the ultimate blood stasis, coagulation and thrombosis and the resulting softening when they occur in cerebral tissue, produce the clinical picture referred to in the opening sentence.

Symptoms: Arterio-sclerosis may have existed for years without attracting attention. Symptoms when present point not to the condition *per se*, but to the effect of the condition.

We should always observe the condition of the other arteries as well as the radial pulse in making ordinary examinations. The symptoms which lead us to look for arterial sclerosis are as follows: palpitation, dyspnea on exertion, headache, tinnitus, vertigo, syncopal attacks, local paralysis, and slight aphasia with various mental disturbances. If with the above we find hardened arteries, increased arterial tension, left ventricular hypertrophy and marked accentuation of the aortic second sound, we have a combination of symptoms which leave no doubt as to a diagnosis.

Now, with a patient before us and a diagnosis of arterial sclerosis having been made, where shall we put the stress of our anxiety in regard to that patient? Which is the greater danger—the bursting of an artery or its becoming occluded with a thrombus?

I confess that up to a few months ago I feared rupture more than thrombosis, but now, when I reflect that the symptoms which we are called upon to treat are not those of impending rupture, but rather of a disturbed blood supply, I am bound to say that I have now more fear of a complete shutting off of the blood supply and consequent loss of vitality in the parts affected, than I have of ruptured vessels. The time when thrombosis takes place is probably more often in the early hours of the morning when the vital forces are at their lowest ebb.

The lumen of the vessel has been encroached upon by the thickened walls and the flow of blood thereby impeded; then when the blood pressure is at its lowest, stasis and coagulation occur. The patient who went to bed the night before in usual health wakes up in the morning, or fails to wake up, and is found to be paralyzed.

Treatment: So far as physiological arterial sclerosis is concerned, probably nothing we can do will stay its progress. We have not yet found the fountain of youth. We can, however, do much to put off its evil consequences. The patient should be enjoined to live a quiet, well-regulated life, avoiding excesses in food and drink. It is usually best to explain frankly the condition of affairs and so gain his intelligent co-operation. All recognizable causes should be removed or their effects mitigated as far as possible. When syphilis is present much may be expected from proper treatment. Even in the absence of syphilis the iodides are indicated for their effect on the arterial depositions.

This in brief is the outline for the general treatment. In regard to special symptoms, such as dyspnea, aphasia, vertigo, etc., with weak heart action and high peripheral resistance, I formerly hesitated to give cardiac stimulants for fear of rupturing some weakened vessel. I now use these stimulants simultaneously with nitroglycerine. The nitroglycerine should be given in quantities sufficient to produce peripheral relaxation. In apoplectic attacks, I can see no philosophy in blood letting, and even in cerebral hemorrhage it can have no effect on the brain lesion, though it might relieve the embarrassed heart and pulmonary circulation. In thrombosis it could only favor further blood stasis.

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EDITORIAL COMMENT.

THE 58TH ANNUAL MEETING OF THE STATE MEDICAL SOCIETY OF WISCONSIN.

Whatever misgivings there may at one time have existed of the wisdom of uniting the whole profession on a county basis and amalgamating the component societies into a state federation, have truly been dissipated by the unqualified success of the meeting that has so recently held forth in Milwaukee. One may have contemplated a success over previous years, but the Society did not satisfy itself with an improvement of small degree. So well had the work of the councilors been done, and so thoroughly had they organized their respective districts, that when Secretary Sheldon called out in open meet-

ing, "the sixty-second and last county heard from," and waved the document in proof thereof, it bore evidence that the doubters had left a clear and unobstructed field to those master minds who had conceived and carried out their plan of organization and government by representation on a geographical—hence equable basis. We have reason to be proud of our progressive state, proud of the individual members of the profession who have brought a good cause to a successful issue.

As to the expeditious and general satisfactory working of the executive sessions, there seems to be a unanimity of opinion.

The House of Delegates accomplished the work set before it in relatively little time, and the convention hall proper was devoted solely to the scientific program.

The selection of Dr. Chas. W. Oviatt, of Oshkosh, as president for the ensuing year, cannot but meet with the greatest satisfaction throughout the State. Dr. Oviatt has been an active member of the Society since 1894 and is prominent in the medical affairs of our state.

The program was exceptionally rich in good material, and the two very able papers of our distinguished guests, Drs. James C. Wilson of Philadelphia, and Roswell Park of Buffalo, were rare treats, and—one might say—epoch making, because both emphasized so strongly the new trend of the medical thought of this advanced period.

President Walbridge's address was a masterful arraignment of abuses conceded to exist here as elsewhere in this country. He could hardly have selected a subject better calculated to make men think, nor have brought home to his hearers more keenly the defects of educational methods in medicine, and the many abuses in the practice of it. If this address gave rise to a fit of indigestion on the part of any present, the remedy therefore was also provided.

The address appears in this issue of the JOURNAL, and is worthy of careful reading.

The president felt that he had a "Message to Garcia," and we are the better for his having delivered this message.

The Committee of Arrangements is to be felicitated upon the happy innovations introduced, the very large attendance at the concert and supper bearing testimony to the ready approval with which their efforts were received.

The complimentary smoker tendered the guests by the Milwaukee Medical Society served to bring about a general introduction that paved the way to a more agreeable visit on the part of many who were strangers among us, and was generally conceded to have been a social event of no little importance and pleasure to all present.

At no previous occasion have the wives of visiting members been so generously welcomed and so lavishly entertained, and no little recognition is due the Milwaukee ladies who undertook to provide these entertaining diversions.

The 58th annual meeting, the first under the reorganization plan, has come and gone, but it has left in its wake a realization of the immense strikes taken since last we met, a feeling of solidity and spirit of solidarity, and a conviction that the important step toward a good understanding on the part of the Wisconsin profession, on a sound basis, has at last been successfully taken.

With all due modesty the JOURNAL bespeaks for itself a modicum of praise and trusts it has earned the title of "Official Organ," as the medium for the official communications of all members to all members, and thus helping to still more closely cement the bonds of union between the various counties. The fact that the JOURNAL was again adopted as the Society's official organ, proves that we have not overrated the little influence for good wielded.

NATHAN SMITH DAVIS, M. D.

It is a great thing to have enjoyed an active career as a practitioner of medicine for sixty-seven years. It is a still greater thing to have been regarded as a leader in medical thought and in medical education during a period of at least sixty years. It is in a still higher degree a great thing to have pursued such a career during all these years as to be regarded as a Nestor and friend by the older generation, and an exemplar and guide by the younger.

Such a man was Nathan Smith Davis, M. D., founder of the American Medical Association, whose death occurred at his home in Chicago, June 16th last. To the profession at large. outside the circle of his immediate personal acquaintances, Dr. Davis was known as being specially active in matters pertaining to medical organization, medical education, and a proper understanding of the pharmacology of alcohol.

If one stops to enquire in what particular work a physician may engage, otherwise than in the practice of his profession, whereby he may effect the greatest good to the greatest number, and leave the impress of his personality on those left behind him, we think these are the three directions in which most can be accomplished.

In the matter of medical organization Dr. Davis was intimately concerned in the founding, growth and development of the American Medical Association, and later with the organization of the Chicago Medical Society and the Illinois State Medical Society, and among the objects of these societies was the elevation of the standard of medical education in the United States. In these organizations Dr. Davis was a commanding and influential figure to the day of his death.

In the matter of medical education, he was equally active, alert and progressive, and, owing to his ardent desire for reform in medical teaching, he withdrew from the Faculty of Rush Medical College and established the Chicago Medical College in 1859 where he devoted the best years of his life to the work of teaching the principles and practice of medicine and in unceasing efforts to broaden the culture of medical men and students, thereby elevating the general standard of efficiency of medical practice throughout the middle west.

In the matter of the pharmacology of alcohol he was one of the first to teach what is now coming to be generally recognized as the true status of this drug as a therapeutic agent. In this he was a pioneer, abandoning alcohol as a cardiac stimulant more than a generation ago and persistently teaching the evils of its use in clinical medicine. In this connection it may be recalled that he was a friend and active advocate of the temperance movement and was one of the founders, and for a long time an officer, of the Washington Home, an asylum for inebriates in Chicago.

Dr. Davis has left to his posterity a heritage worth more than money, a reputation and name that will never be forgotten while medicine is taught and practiced in America.

He died full of years and honors, and in honoring his memory the medical profession honors itself.

Such a man is an inspiration to the rising generation of medical practitioners, and pity 'tis there are not more of them.

PHTHISIOPHOBIA.

At the close of the eighteenth century Bichat, the celebrated French pathologist, remarked that comparatively little was known of the pathology of pulmonary tuberculosis because of the "foolish notion" that the disease was contagious.

This remark would appear to indicate that phthisiophobia was rampant in the eighteenth century.

The affection, however, subsided early in the nineteenth century, very likely largely owing to the teaching of Bichat that the notion of the contagiousness of phthisis was "foolish."

About the middle of the nineteenth century the communicability of the disease was experimentally demonstrated, and in 1881 the specific cause of the disease was finally isolated and cultivated.

Phthisiophobia again became prevalent and may now be said to exist as a virulent epidemic, affecting nearly all classes of the community, both intelligent and ignorant, and even, though in a less degree, the medical profession itself.

Farmers and county boards are frightened out of their wits if it is proposed to establish a sanitorium in their midst, and the unfortunate victim of the disease is regarded as a thing to be avoided at all hazards as one would avoid the plague. Nothing is gained by this state of mind, and the poor victim of the disease is likely to be, and often is, treated in a most unfeeling and brutal manner. It is not very long ago that a diligent search was necessary in order to discover instances in which the disease had been spread by personal contact. Such instances were found, to be sure, but they were astonishingly few, when we remember the great prevalence of the disease.

It is time that members of the medical profession took a definite and unequivocal stand on this point, and it is time that the general public should be informed that a tubercular patient is not a menace to his friends or family so long as his tuberculous sputum is scrupulously destroyed. In properly conducted pulmonary sanitoria neither attendants nor physicians are ever infected with the disease. Finally, we cannot do better than quote a recent writer, who says: "Let the ways and means whereby the conscientious consumptive who takes care of his expectoration may become as safe an individual to associate with as anybody else, be known everywhere and to everybody; let it be known to the public that consumption is a preventable and curable disease, and that the earlier a consumptive submits himself to medical guidance and treatment, the greater are his chances for recovery; and let it be known that good food, plenty of pure air and a sober life are the most important factors in accomplishing this cure. Let the public be taught not to shun the consumptive, but to be helpful to him, so that he may have no occasion to hide his disease and thus become a secret source of infection. Let all those who can, financially or otherwise, help in the establishment of sanatoria for consumptive adults and tuberculous and scrofulous children."

ESTABLISHMENT OF A COLONY FOR EPILEPTICS IN WISCONSIN.

The subject of provision for sufferers from epilepsy is one deserving in a high degree the attention of philanthropic individuals and communities, and it is highly appropriate that the medical profession should take the initiative in anything that is to be accomplished for the welfare of this class.

The unfortunate and necessitous condition of the victims of epilepsy need not be extensively dwelt upon here. A large majority of all those afflicted with epilepsy are either permanently or periodically incapacitated for the ordinary responsibilities, duties or pleasures of life. Probably one-third of them are palpably insane or mentally impaired to such an extent that they are periodically or permanently placed in the asylum or alms-house, where they are the source of unending anxiety and trouble from their sudden and distressing convulsive attacks, and likewise from the insane madness and fury which often accompany or replace these attacks and during which such patients often commit acts of violence and destruction.

The presence of these insane epileptics among the other inmates is injurious, especially in the hospitals for the acute insane, where there are many curable and convalescent patients who are disturbed and terrified by the epileptic paroxysms. Furthermore, their own welfare demands such care, treatment and custody as can only be provided in an institution of their own.

On the other hand such victims of epilepsy as have only infrequent attacks and have not become so seriously impaired mentally as to require confinement, are in a not less distressing position in the community. Their sickness debars them from pursuing all ordinary avocations or occupying any position of responsibility or trust, and makes them objects of dread and abhorrence notwithstanding the fact that they may be during nine-tenths of the time as capable of transacting business as the average citizen, and, in fact, many of them are persons of unusual ability and endowments in various directions.

It is evident that the needs of such a class of unfortunates, the vast majority of whom are dependent upon public benevolence, require to be met by some carefully studied special provision, and if argument were needed to prove this fact, the statement that the most progressive and enlightened communities in this country and in Europe have already recognized and met this need, ought be convincing.

The states of New York, Ohio, Massachusetts and Pennsylvania, not to mention several others, have already established institutions for the epileptic which are admirably equipped for their purpose, and are accomplishing valuable work in custodial care, in industrial employment, in curative treatment, and last, but far from least, in the study of epilepsy, as to its etiology, pathology and pathogenesis. The same is true of all the more progressive European states. The Craig colony at Sonyea, N. Y., has served to some extent as a model in this country and has grown to a capacity of over 1,000. It has a tract of 1,800 acres of land and will ultimately have a capacity of 2,000. If there be a defect in the New York plan it is in failing to provide for the epileptics who are insane. The bulk of those provided for at Sonyea are of the class capable of useful industry and for whom curative and palliative treatment is appropriate, but that institution has done little for the hundreds of insane epilepties scattered through the Insane Hospitals of the state. It is, however, unquestionable that the epilepties who have become insane are in many respects more hopeless, more demented and more difficult to care for, but are equally deserving of especial provision.

The plan which it is universally agreed is most appropriate is the establishment of an industrial colony upon a large tract of land suitably situated for agricultural employment, yet readily accessible to a good sized city and to railroad communication. Of course, there should be an abundant and unfailing supply of pure water, means for perfect drainage and all other hygienic conditions. The buildings should be of a domestic style of architecture suitably grouped for service and for classification. The tract of land should be of such ample extent that complete separation of all insane epilepties could be secured, so that these latter need not be brought in contact with those who are practically sane.

The State of Wisconsin is behind the times in this matter, and needs arousing to its duty in the premises, as there can be no doubt the people of our state are as ready as those of any other community to extend enlightened help to the sick and unfortunate when once their duty is made plain.

A movement for formulating appropriate legislation should at once be set on foot and, indeed, the signs of the times indicate it has already begun. A bill will undoubtedly be introduced at the next session of the legislature providing for the selection and purchase of a tract of land. Probably not less than one acre for every inmate should be the proportion of land. It is unquestionable that event-

nally, and indeed, at the present moment, Wisconsin has 1,000 of this unfortunate class urgently in need of care; the proportion to the population of this class of cases having been generally found to be not less than one epileptic to six hundred of the population, which would give Wisconsin about 3,000 to-day. And at the very outset an ample tract of land for all future time should be secured.

We were very glad to see this subject brought to the attention of the State Medical Society at its recent meeting by Dr. W. A. Gordon of the Northern Hospital for the Insane. Dr. Gordon made an able and telling presentation of the subject and his views found hearty support.

Dr. Gordon recommends that a concerted movement should be made upon the legislature next winter to secure the setting aside of a tract of land of ample dimensions, and an appropriation of $300,000 for the purchase of land and erection of buildings. The amount of money named would provide for three hundred or three hundred and fifty patients, as a minimum initial per capita for each patient accommodated would be from $800 to $1,000; additions could be made later at a lower rate per capita. Dr. Gordon makes the wise suggestion that physicians desirous of seeing epileptics provided for should call upon their respective candidates for the legislature *as soon as nominated* and while their minds are in a plastic state, and ask for a pledge to support this most deserving measure; after election is over representatives of the people are apt to have a less keen interest in the wishes of their constituents; there can be little doubt that this measure would be heartily supported as soon as its merits are understood, and that the movement would be popular with the people.

We would urge upon our readers to interest themselves in this matter in their respective communities.

NEWS ITEMS.

Changes in the Faculty of the Wisconsin College of Physicians and Surgeons were made as follows at the last meeting of the Board of Directors: Robert G. Sayle, M. D., Professor of Clinical Surgery; Howard Clark Miller, M. D., Adjunct Professor of Pediatrics; James D. Madison, B. S., M. D., Adjunct Professor of Medicine; Arthur J. Patek, A. B., M. D., Adjunct Professor of Medicine; Milton M. Spitz, M. D., Lecturer on Therapeutics; Frank E. Darling, B. S., M. D., Lecturer on Bacteriology; and Thomas Willett, B. S., M. D., Lecturer on Histology and Embryology. The following additions have been made to the Faculty: D. E. W. Wenstrand, M. D., Special Lecturer on Life Insurance; George A. Carhart, B. S., M. D., Instructor in Gynecology; Frederick C. Gillen, M. D., Lecturer on Diagnosis; Robert G. Washburn, B. S., M. D., Assistant Demonstrator of Anatomy; Curtis E. Evans, A. B., M. D.,

Assistant Demonstrator of Anatomy; William S. Darling, B. S., M. D., Instructor in Pathology; George C. Ruhland, M. D., Instructor in Clinical Microscopy; Norman W. Hollenbeck, B. S., M. D., Assistant Demonstrator of Anatomy; Fred A. Stratton, M. D., Instructor in Chemistry; Charles W. Hughes, M. D., Assistant Demonstrator of Anatomy; and Clarence C. Bassett, A. M., Instructor in Physiology.

New Quarterly Journal and Review of Ophthalmology.—Beginning with October 1st, "*Ophthalmology*," a new quarterly journal of essays, abstracts, and reviews will appear. This journal is owned, edited, and published by and for the medical profession, from the American Medical Association press, by the following Staff: Managing Editor, H. V. Würdemann, Milwaukee; Assistant Editor, Nelson M. Black, Milwaukee.

Chiefs of Departments: Chas. H. May, New York; Casey A. Wood, Chicago; Chas. A. Oliver, Philadelphia; Blencowe E. Fryer, Kansas City; Albert B. Hale, Chicago; Edmund E. Blasuw, Buffalo; Chas. Zimmermann, Milwaukee; Wm. Zentmayer, Philadelphia; J. Guttman, New York; Frank Allport, Chicago; Prof Dr. M. Wicherkiewiez, Craeow, Austria; Mitsiyasu Inouye, Tokio, Japan; Cland Worth, F. R. C. S., London, England.

In addition to these Staff editors, there are fourteen other collaborators and well known foreign correspondents. The Staff promises the very best press work, regularity of appearance, and the highest class of contents. The subscription price is $5.00 per year.

Superior, Wis., is almost free from contagious diseases. There are at present but one or two cases of scarlet fever and diphtheria, only a few cases of typhoid, and but one case of small-pox. Of the latter disease there have been fewer cases during the past winter than at any time in the preceding three years.

The Henry K. Wampole Co. has followed in the line of other large pharmaceutical houses and has begun the publication of a journal, "Therapeutic Notes," devoted to preparations of its own manufacture.

The Washburn-Sawyer-Burnett County Medical Society's regular meeting which was to have been held at Spooner on June 10, was postponed on account of an epidemic of diphtheria at the place of meeting.

Dr. John M. Dodd, of Ashland, has been appointed chief surgeon of the St. Joseph's Hospital. He is closing his own private hospital, which he has conducted in that city for the past ten years.

Dr. J. J. Quinn, of Superior, died quite suddenly on June 18th, as a result of a self-administered overdose of chloroform, which drug he had been in the habit of using for insomnia.

J. H. Turner, M. D., who was a Surgeon of the First Wisconsin Volunteer Cavalry in the Civil War, died at his home in Berlin, Wis., May 26, aged 85.

George A. Geist, M. D., of Prairie du Chien, died on June 16, aged 30. He was a graduate of the University of Michigan, 1897.

L. E. Hutchinson, M. D., died at his home in Marinette, on June 8, from cerebral hemorrhage complicating pneumonia, aged 54.

Removal.—C. E. Lander has removed from Johnson Creek to Viroqua.

BOOK REVIEWS.

International Clinics.—A Quarterly of Illustrated Clinical Lectures. Edited by A. O. J. Kelly, A. M., M. D., Philadephia. (The J. B. Lippincott Co.) Vol. I, Fourteenth Series.

This volume opens with a series of articles on Treatment which are both timely and valuable.

The late Dr. N. S. Davis of Chicago contributes to the section on Medicine an article on pneumonia, discussing its prevalence and mortality during the past sixty years. In this article Dr. Davis takes occasion to reiterate his well known views as to the action of alcohol (which are coming to be accepted by an ever-increasing number of the practitioners of medicine) attributing a large proportion of the mortality from this disease to the administration of this drug, which is an anesthetic and narcotic, when cardiac stimulation is urgently needed.

James J. Walsh of New York discusses the early diagnosis of pulmonary tuberculosis, than which nothing can be more vitally important as bearing on the possibility of adopting efficient lines of treatment. Emphasis is laid on the necessity of acquainting the patient with the exact nature of his disease, for only by this means can the physician secure that active, persistent and continuous co-operation on the part of the patient upon which his salvation absolutely depends.

There are five clinical lectures on surgical subjects: Angioma and Its Treatment, by Carl Beck; A Critical Review of Methods of Intestinal Anastomosis, by John G. Clark and John W. Luther; Complications met in the Surgical Treatment of Diseases of the Testicle, by J. McFadden Gaston; Observations upon Gastric, Intestinal, and Liver Surgery in the German Clinics, by Charles P. Noble; and A New Surgical Mallet, by Frederick Griffith.

In the Department of Gynecology there are two lectures, as follows: The Non-Operative Treatment of Inflammations of the Genital Tract, by Francis H. Davenport; and The Non-Operative Treatment of Chronic Ovarian Lesions, by Daniel H. Craig.

In the Department of Neurology there is but one lecture, by William B. Pritchard, on Peripheral Neuritis.

The special feature of this volume is a review of the progress of Medicine during the year 1903, occupying 130 pages of the book. Dr. David L. Edsall of Philadelphia has contributed the review of medical progress, covering the field of infectious and constitutional diseases; Dr. Joseph C. Bloodgood of Baltimore has similarly reviewed surgical progress, including a discussion of surgical infections, fractures, tumors, gastric and pancreatic surgery, burns, scalds, etc., etc. Dr. A. A. Stevens of Philadelphia reviews the progress of Treatment as applied to infections fevers, blood and glandular diseases, constitutional diseases and diseases of the parenchymatous organs.

On the whole this volume compares very favorably with its predecessors.

(W. H. W.)

THE STATE MEDICAL SOCIETY OF WISCONSIN.

ORGANIZED 1841.

Officers for 1904-1905.

C. W. OVIATT, Oshkosh, President.

J. A. L. BRADFIELD, La Crosse, 1st Vice-President.

GILBERT E. SEAMAN, Milwaukee, 2nd Vice-President.

A. B. ROSENBERRY, Wausau, 3rd Vice-President.

CHAS. S. SHELDON, Madison, Secretary.

S. S. HALL, Ripon, Treasurer.

Councilors.

FOR ONE YEAR.

1st Dist., H. B. Sears, - - Beaver Dam
2nd Dist., J. G. Meachem, - - Racine

FOR TWO YEARS.

3rd Dist., F. T. Nye, - - - Beloit
4th Dist., E. S. Hooper, - - Darlington

FOR THREE YEARS.

5th Dist., J. F. Pritchard, - - Manitowoc
6th Dist., J. S. Walbridge, - - Berlin

FOR FOUR YEARS.

7th Dist., W. T. Sarles, - - - Sparta
8th Dist., J. T. Redelings. - - Marinette

FOR FIVE YEARS.

9th Dist., D. L. Sauerhering, - Wausau
10th Dist., E. L. Boothby, - - Hammond

FOR SIX YEARS.

11th Dist., J. M. Dodd, - - Ashland
12th Dist., A. T. Holbrook, - - Milwaukee

Next Annual Session, La Crosse, June, 1905.

The Wisconsin Medical Journal, Official Organ.

SOCIETY PROCEEDINGS.

ORGANIZATION NOTES.

As predicted in these notes the organization of the entire state was reported at the first meeting of the House of Delegates on the evening of June 21st. In the June number of the JOURNAL there were four counties reported as unorganized: Calumet, Kewaunee, Door, and Richland. Calumet was the first to report, with 6 members; Kewaunee next reported, also with 6 members; Door joined the ranks with 7 members, and, last of all, President De Sap of Richland Center brought to the meeting the roll of Richland county, with 16 members. These have all received charters, making in all 62 chartered county medical societies in the state. Two societies have three counties each; five have two counties each, and 55 separate county societies complete the roll for the 71 counties of the state. The total membership in the 62 societies is 1,311.

We may well congratulate ourselves upon this record of our year's work under the new plan. None have done better. Michigan has been one of the very foremost states in this matter of organization, yet at the last annual meeting there were reported two counties still unorganized, although they adopted the plan one year before us.

The Annual Meeting.

It was thought that the annual meeting would indicate in some measure the results of the new plan as affecting the success and future prospects of the state society. So far as can be judged at this time the results have been entirely favorable. The attendance was much the largest in the history of the society, with a registration of 380. The record for the past six years being, 175, 202, 222, 270, 301 and 380. Of this year's registration, 170 were from Milwaukee, leaving 210 from the rest of the state. This does not represent the whole attendance, since this year only those were allowed to register who had paid their dues for 1904.

The spirit of the meeting was excellent and harmonious throughout. Apparently the sentiment was unanimous and pronounced that the new departure was working successfully in every way—with no objections nor serious criticisms from any quarter.

The local committee of arrangements had provided an admirable place for the meeting in the Athenaeum, with plenty of room for exhibits, committees, etc. The whole committee was in evidence during the meeting, though it might be mentioned that Drs. Gray and Dearholt of the sub-committee on registration deserve especial credit for their arduous and faithful services.

The entertainment for the visiting ladies was carried out most successfully by Mrs. A. T. Holbrook, the chairman, and was greatly appreciated by out-of-town guests.

The scientific exercises were unusually attractive—with good papers and interesting discussions. The papers by Drs. Park and Wilson fully sustained the reputation of the writers and added much to the interest of the meeting.

The House of Delegates and the Council each held a session each day of the meeting. It was clearly manifest that the business of the society was dispatched with much more ease and celerity than by the whole society, which by this plan gains much time for scientific work.

HOUSE OF DELEGATES.

The first meeting of the House of Delegates was held on Tuesday evening, the 21st, at the rooms of the Milwaukee Medical Society. Forty delegates were present, together with the Council and the other officers of the society. Drs. Seaman and Sarles reported as delegates to the American Medical Association. Then followed reports from the separate members of the council, giving in detail the results of organization the past year in each district up to date. The report showed the whole state organized. The treasurer reported a balance

in the treasury of over $3,000.00. This seems a large sum, but, as stated, we shall receive but little more till next April—nearly a year hence—and that meanwhile the expenses of the society must be met. Never have the finances of the society seemed to be upon a firmer basis, with the present dues sufficient to meet all probable claims. The report of the secretary followed.

Our numbers now entitle us to three delegates to the American Medical Association. Dr. Edward Evans, of La Crosse, was elected last year, Drs. W. T. Sarles, of Sparta, and L. F. Bennett, of Beloit, were added as delegates to the next meeting. Drs. Wingate, Seaman and Currens were appointed as the Committee on Public Policy and Legislation. Drs. W. H. Washburn, Edward Evans and the Secretary were appointed as the Committee on Scientific Work, or the Program Committee for the next meeting.

A nominating committtee of ten was appointed to report at the last meeting of the House of Delegates on Friday.

Inasmuch as the congressional districts adopted last year, for convenience, as the councilor districts, are illy adapted for the purpose and subject to political changes, a committee consisting of the Provisional Council was appointed to re-district the state.

La Crosse was chosen as the next place of meeting.

At the second meeting of the House of Delegates the contract with the WISCONSIN MEDICAL JOURNAL was renewed for one year upon the same terms.

The committee appointed to re-district the state reported twelve councilor districts instead of ten as before, as follows:

1. Dodge, Washington, Jefferson and Waukesha.
2. Racine, Walworth and Kenosha.
3. Dane, Green, Rock, Sauk and Columbia.
4. Crawford, Richland, Grant, Iowa and LaFayette.
5. Manitowoc, Calumet, Sheboygan and Fond du Lac.
6. Waupaca, Outagamie, Winnebago, Waushara, Green Lake and Marquette.
7. Buffalo, Trempealeau, Jackson, La Crosse, Monroe, Juneau, Adams and Vernon.
8. Forest, Florence, Marinette, Oconto, Shawano, Door, Kewaunee and Brown.
9. Taylor, Lincoln, Langlade, Portage, Clark, Wood and Marathon.
10. Polk, Barron, Gates, St. Croix, Dunn, Chippewa, Pierce, Pepin and Eau Claire.
11. Douglas, Bayfield, Ashland, Iron, Price, Sawyer, Washburn, Burnett, Vilas and Oneida.
12. Milwaukee and Ozaukee.

At the meeting of the House of Delegates on Friday the committee on nominations made the following report, which was adopted:

President, C. W. Oviatt, of Oshkosh.

1st Vice-President, J. A. L. Bradfield, of La Crosse.

2nd Vice-President, Gilbert E. Seaman, of Milwaukee.

3rd Vice-President, A. B. Rosenberry, of Wausau.

COUNCILORS.

For One Year: 1st District, H. B. Sears, of Beaver Dam; 2nd District, John G. Meachem, of Racine.

For Two Years: 3rd District, F. T. Nye, of Beloit; 4th District, E. S. Hooper, of Darlington.

For Three Years: 5th District, J. F. Pritchard, of Manitowoc; 6th District, John S. Walbridge, of Berlin.

For Four Years: 7th District, W. T. Sarles, of Sparta; 8th District, J. T. Redelings, of Marinette.

For Five Years: 9th District, D. L. Sauerhering, of Wausau; 10th District, E. L. Boothby, of Hammond.

For Six Years: 11th District, J. M. Dodd, of Ashland; 12th District, A. T. Holbrook, of Milwaukee.

A committee, consisting of the president of the Program Committee, was authorized to arrange for two sections of the society at the next meeting if thought desirable.

It was voted that non-residents of the state should be eligible for honorary membership only.

As to the formation of District Societies, it was the sense of the House of Delegates that they should be organized as rapidly as the circumstances of the case would permit. There were present at the various sessions fifty delegates. At a meeting of the new council on Friday morning, W. T. Sarles was elected President, and A. T. Holbrook Secretary.

The social features of the meeting were well sustained; the smoker given by the Milwaukee Medical Society on Monday evening was delightful in every way and afforded a rare opportunity for renewing old and forming new acquaintances.

The supper and concert at the Deutscher Club was voted by all an unqualified success and superior as a social function to the usual banquet.

All in all, it was our most successful meeting to date and augurs well for the future of the society. C. S. S.

CORRESPONDENCE.

The Recent Meeting a Success.

OSHKOSH, WIS., July 5, 1904.

EDITOR WISCONSIN MEDICAL JOURNAL:

My election as President of the State Medical Society of Wisconsin came to me entirely unexpected and I am at a loss to know how to express my gratitude for this high compliment. I can only say that no honor could have been bestowed upon me which I would more fully appreciate, for I feel that the State Medical Society of Wisconsin ranks with the best in point of scientific work done and in unity of interests for the advancement of the profession. It will be my earnest endeavor to work for the best interests of the Society in every way possible.

I am sure that we all have reason to feel gratified beyond measure for the success that attended our recent meeting under the new organization. I think it must be the opinion of all that it was a pronounced success, and that the new method will enhance the usefulness of the organization both to the profession and the public in a way that could not have been attained under the old regime. I feel that the profession should appreciate the part that is being played in this new plan by the WISCONSIN MEDICAL JOURNAL, bringing, as it does, the work of this Society to the hands of the profession in a much more desirable form than in the publication of annual Transactions. It should receive the hearty support of every member of the profession in the state. Yours truly, C. W. OVIATT.

MILWAUKEE, WIS., July 7, 1904.

EDITOR WISCONSIN MEDICAL JOURNAL:

Our hopes of one year ago have been realized beyond our expectation in the matter of reorganization. The secretary reported the organization of the last county during our June meeting and I take this opportunity to thank the councilors for the work done during the year. I doubt if the work done in Wisconsin has been equalled in any other state, and it is due to the efficient work of the councilors that the June meeting was the most successful in the history of the society.

I believe, too, that to the WISCONSIN MEDICAL JOURNAL is due a large share of the credit of the success we have witnessed in the inter-

C. W. Orviatt

PRESIDENT OF THE STATE MEDICAL SOCIETY OF WISCONSIN,
1904 - 1905.

est manifested throughout the state. The reports from the county societies received through the medium of the JOURNAL indicate an interest never before manifested by the profession of the state.

I think it will be acknowledged by all, even those who were in doubt one year ago, that the plan of reorganization as outlined by the American Medical Association is the most important step ever taken by the society.

I take this opportunity to thank the members of the State Society for their uniform courtesy during our last meeting and for the interest manifested in the scientific proceedings. F. E. WALBRIDGE.

SPARTA, WIS., June 26, 1904.

EDITOR WISCONSIN MEDICAL JOURNAL:

The meeting of the State Medical Society just concluded in Milwaukee was certainly the most successful of the meetings held by our society. The increase in membership and interest were both beyond the expectations of the most sanguine. The councilors did their work well, and the society is to be congratulated upon the results of their efforts in the reorganization. The manner in which the business of the society was expedited and the resulting freedom thus given to the scientific work by instituting the House of Delegates, was plainly manifest to all and especially so to those previously accustomed to work in the society before reorganization. The redistricting of the state and the organization of societies in each councilor district promises still better results to our already unexampled experience. We have now grown to such proportions in numbers and scientific attainments that the House of Delegates thought best to do the scientific work of the coming annual meeting in two sections, so that a larger number of papers may be read and a fuller discussion be given to each. This will give each member once again the personal experience in the scientific discussions, as well as material for publication and subsequent digest. It is to be hoped that the trial may prove the efficiency of the undertaking.

Milwaukee is to be congratulated and sincerely thanked for the manner in which her generous and large hearted medical men and their good wives so pleasantly entertained their visiting brethren and their families, and for the active scientific and business interest taken by the resident members of the society in making this the most successful meeting in our history. W. T. SARLES.

DIRECTORY OF COUNTY SOCIETIES.

COUNTY.	PRESIDENT.	SECRETARY.
Ashland	W. T. Rinehart, Ashland.	N. N. Glim, Ashland.
Barron-Gates-Polk	O. M. Sattre, Rice Lake..	I. G. Babcock,Cumberla'd
Bayfield	H. G. Lampson, Washb'n	T. B. Hicks, Washburn
Brown	D. H. Gregory, De Pere.	A. V. de Neven, Gr'n B'y
Buffalo-Pepin	M. B. Axtell, Pepin.....	P. B. Amunson, Mondovi.
Chippewa	C. A. Hayes, Chipp.Falls.	J.N.Cunningham, Stanley.
Clark	D. R. Freeman, Colby...	V. M. French, Neillsville.
Columbia	J. J. Howard, Columbus.	F. D. Bentley, Portage.
Crawford	G. H. Perrin, Wauzeka..	A. J. McDowell, Sol. Gr'v
Dane	C. A. Harper, Madison..	R. H. Jackson, Madison.
Dodge	E. M. McDonald, B. Dam.	H. B. Sears, Beaver Dam.
Douglas	George Saunders.....	W. W. Pretts, Superior.
Dunn	E. H. Grannis, Menomo'e.	G. A. Barker, Menomonie
Eau Claire	J.V.R.Lyman,Eau Claire.	H. A. Fulton, Eau Claire.
Fond du Lac	J.H.McNeil, Fond du Lac.	Flora A.Reed,FondduLac.
Forest-Florence	C. A. Decher, Crandon...	S. M. B. Smith, Crandon.
Grant	J. Oettiker, Platteville..	P. L. Scanlan, Lancaster.
Green	Sam'l Moyer, Monroe...	Wm. B. Monroe, Monroe.
Green Lake	C. E. Thayer, Markesan.	B. E. Scott, Berlin.
Iowa	W. J. Pearce, Dodgeville.	S. P. Deahofe,Mineral Pt.
Iron	J.H.Urquhart, Iron Belt.	T. J. Hambley, Hurley.
Jefferson	Wm. W. Reed, Jefferson.	Carl Feld, Watertown.
Juneau	J. B. Edwards, Mauston.	A. T. Gregory, Elroy.
Kenosha	G. Windesheim, Kenosha	F. E. Andre, Kenosha.
La Crosse	F. C. Suitor, La Crosse..	C.H.Marquardt,La Crosse
Lafayette	C. C. Gratiot, Shullsburg.	C.Lehnkering, Darlington
Langlade	I. D. Steffen, Antigo....	Frank I. Drake, Antigo.
Lincoln	W. H. Monroe, Merrill..	C. C. Walsh, Merrill.
Manitowoc	Louis Falge, Reedsville..	J. E. Meany, Manitowoc.
Marathon	D. La Count, Wausau...	H. L. Rosenberry,Wausau
Marinette	T.J.Redelings, Marinette.	A. T. Nadeau, Marinette.
Marquette	W.J.Thompson, Briggsv'l	W. O. Dyer, Westfield.
Milwaukee	G.E.Seaman, Milwaukee.	A. W. Gray, Milwaukee.
Monroe	G. R. Vincent, Tomah...	C. M. Beebe. Sparta.
Oconto	C. W. Stoelting, Oconto.	H.F.Ohswaldt,OcontoFalls
Oneida	C.D.Packard, Rhinel'der.	S. R. Stone, Rhinelander.
Outagamic	C. D. Boyd, Kaukauna..	M. J. Sandborn, Appleton
Ozaukee	E. E. Couch, Pt. Wash..	Thos.A.Berwick,Saukville
Pierce	Henry C. Cotton, Presc'tt	D.Woodworth, Ellsworth.
Portage	Galen Rood, Stevens Pt..	C.v.Neupert,Jr.,Stev's Pt.
Price	W. P. Sperry, Phillips...	A. D. Gibson, Park Falls.
Racine	W. S. Haven, Racine....	C. F. Browne, Racine.
Rock	Ernest C. Helm, Beloit.	G. W. Fifield, Janesville.
Sauk	Chas. Gorst, Baraboo...	Roger Cahoon, Baraboo.
Shawano	W.H.Cantwell, Shawano.	H. W. Partlow, Shawano.
Sheboygan	O. J. Gutsch, Sheboygan.	H. C. Reich, Sheboygan.
St. Croix	E.L.Boothby, Hammond..	L. P. Mayer, Hudson.
Taylor	E. LeSage, Medford.....	J. H. Francis, Medford.
Trempealeau-Jackson	G. N. Hidershide,Arcadia	Henry A. Jegi, Galesville
Vernon	J. K. Schreiner, Westby.	C.H.Trowbridge, Viroqua
Vilas	A.B.Rosenberry, Arbor V.	W. E. Wray, Minocqua.
Walworth	B. J. Bell, Genoa Junct'n	W. A. Loops, Darien.
Washb'n-Sawy'r-Burn'tt.	J.B.Trowbridge, Hayw'd.	E. R. Hering, Shell Lake.
Washington	H. Blank, Jackson.....	G. A. Heidner,West Bend
Waukesha	B. M. Caples, Waukesha.	A. J. Hodgson.Waukesha.
Waupaca	L. H. Pelton, Waupaca..	J. F. Corbett,Weyauwega.
Winnebago	G. M. Steele, Oshkosh...	S. B. Ackley, Oshkosh.
Wood	O. T. Hougen, G. Rapids.	F. Pomainville, G.Rapids

SYNOPSIS OF PROCEEDINGS 58TH ANNUAL MEETING OF THE STATE MEDICAL SOCIETY OF WISCONSIN, AT MILWAUKEE, JUNE 22, 23, 24, 1904.

HOUSE OF DELEGATES.

The House of Delegates, on June 21st, held its first meeting under the constitution, and the celerity with which business was despatched demonstrated the advantages of the new plan of organization. The councilors recounted the successful organization of county medical societies. The treasurer's report showed the society to be in a flourishing condition financially. The secretary gave an interesting account of the labors of the councilors and officers in the reorganization work, the great increase in membership and the new era of prosperity on which the society had evidently entered; he said that the new constitution was working to better advantage than its most sanguine advocate had dared to hope. A business committee of five was appointed to determine what communications offered should be referred to the council.

In addition to Dr. Evans, who holds over, the following delegates and alternates to the next meeting of the American Medical Association were selected: Dr. John Walbridge, alternate to Dr. Evans; Dr. W. T. Sarles, Dr. C. S. Sheldon, alternate; Dr. Bennett of Beloit, Dr. J. M. Dodd, alternate.

Drs. U. O. B. Wingate, G. E. Seaman and J. R. Currens were selected as the committee on public policy and legislation.

La Crosse was selected as the next place of meeting.

Adjournment.

Thursday, June 23, 8 a. m.

The state was re-districted into 12 convenient districts, not following congressional divisions.

A contract was made with the WISCONSIN MEDICAL JOURNAL for the publication of the proceedings of the society for the ensuing year, on the same terms as the preceding contract.

A petition requesting the speedy enactment of a bill by Congress incorporating the American Medical Association, was signed by the delegates.

The Secretary, Dr. W. H. Washburn of Milwaukee, and Dr. Edward Evans of La Crosse were named as a committee on scientific work.

A committee on nominations was announced, consisting of one member from each district.

Friday, June 24, 8 a. m.

The question of changing the time of meeting to fall was postponed for one year.

The Committee on Scientific Work, together with the Secretary and President-elect, were made a committee to so arrange the program for next year's meeting, that it may be worked in two sections as far as thought desirable, and if the change is found convenient, it may be adopted. This proposition was strongly opposed by Dr. H. B. Sears on the ground that the general practitioner wanted to hear all papers on all subjects. All other delegates who spoke favored the division into sections.

The question of allowing representatives of proprietary medicine men to present their exhibits was left to the local committee of arrangements at La Crosse.

The question of non-resident members was brought up, and it was decided that there could be no non-resident active membership under the constitution, but that non-residents could become honorary members.

The attendance at the House of Delegates was 50, and the attendance at the society meetings 400; 1,330 members of the society have paid dues for 1904.

Adjourned.

SCIENTIFIC PROGRAM.

The 58th annual meeting of the State Medical Society of Wisconsin was called to order on Wednesday, June 22, at 11 a. m., by the President. Hon. D. S. Rose, Mayor of Milwaukee, made the address of welcome, which was responded to by Dr. J. F. Pritchard. The committee on arrangements made its report and a recess was taken.

The convention was called to order at 2 p. m.

Wednesday, June 22, 2 p. m.

The President, Dr. F. E. Walbridge, delivered the annual address, following which the first paper of the session was called for.

INDICATIONS FOR ENTEROTOMY IN SOME FORMS OF INTESTINAL OBSTRUCTION.

Dr. F. Shimonek, of Milwaukee, said: Enterotomy is indicated in obstruction of the intestines resulting from peritoneal infection, as from appendicitis or from other pathological conditions leading to peritonitis, which may cause inflammatory paralysis or angulation and adhesions. The first arrests normal peristalsis by the inflammatory infiltration of the musculature of the intestines; the second by creating a mechanical impediment to the discharges of the intestinal canal. The contents may be evacuated through an enterotomy opening, thus relieving the intra-intestinal pressure, and by straightening out any

existing angulation or the removal of adhesions the paralyzed canal is afforded a chance to resume its peristalic function as well as removing the pressure from the diaphragm and minimizing auto-infection. When the contents find exit and the intestines are collapsed one may then find the real cause of the obstruction, so in this sense enterotomy may be utilized for diagnostic purposes as well.

Extreme care must be exercised in performing the operation and in closing the opening in the intestinal wall in order to prevent any additional soiling of the peritoneum, both from the manipulations and from leakage.

Discussion.

Dr. W. A. Batchelor, of Milwaukee, said: In many cases of general peritonitis this procedure will improve the patient's chances, and post- operative sequelæ frequently follow the operation. The chief indication for enterotomy is over distension. Patients of this character frequently endure anesthesia badly.

Dr. O. Thienhaus, of Milwaukee, advocated evisceration as an operative procedure; and this view was opposed by the writer of the paper.

THE MORAL ASPECT OF ABORTION, CRANIOTOMY AND EXTRA-UTERINE PREGNANCY.

T. L. Harrington, of Milwaukee, stated that the lack of positive teaching on moral questions leads to a difference in the conduct of conscientious physicians. The destruction of the fetus at any stage of its existence is homicide, and violates the old command "Thou shalt not kill." The argument that the life of the mother is of more value than the life of the child is untenable, and should never be resorted to. The ancient assertion that the end justifies the means was proven unsound centuries ago. Once admit either of these, and you throw open the door to the professional abortionist who will justify his vile traffic with other arguments, such as the health of the mother, the size of the family, the honor of the unfortunate maiden, etc.

In extra-uterine gestation the danger to mother and fetus comes from the rupture of the sac and subsequent hemorrhage. The physician is justified in removing the sac after an abdominal section, though in doing so he indirectly caused the death of the child.

But he may not—either on scientific or moral grounds—attack the life of the fetus directly, either by injections of morphine into the sac or by puncture with an electrical needle. Craniotomy of the living child is never justifiable. Because you are not permitted to directly take the life of an innocent person. And for a further reason that you can save about as many mothers by Cæsarian section and can, in addition, save from 90 to 95 per cent. of the children.

Discussion.

Dr. J. J. McGovern, of Milwaukee, said that we are not only justified, but it is our duty under certain conditions to perform an abortion to save the mother's life. Not over 40 per cent. of conceptions reach maturity, and the mother's life is therefore more valuable than the child's. Medical societies should attempt to stop criminal abortions. When the mother's life is in peril the first consideration must be given the mother.

Dr. Edward Evans, of La Crosse, said that he believed that 50 per cent. of the physicians in Wisconsin would perform criminal abortions. This statement was indignantly denied by members of the society.

THE USE OF DRUGS IN LABOR.

Dr. J. F. Ford, of Omro, said that there is a tendency toward a use of fewer drugs in labor; that the use of ergot even now seems to be justified by quite a number of general practitioners, a recent instance being cited in a late number of the *Journal of the American Medical Association*, and which was promptly condemned by the editor, but that such use of the drug is not in accord with the teachings of leading obstetricians, and that its only safe place is as a hemostatic and indirect post-partum antiseptic; that quinine and other so-called oxytoxics act as nerve stimulants and muscular tonics; and that the exigencies of rural practice render it certain that drugs will be used.

Discussion.

Dr. Hugo Philler, of Waukesha, said he would as soon go to a case of labor without his scissors as without chloroform. The use of chloroform in labor met with general favor.

INTERMITTENT CLAUDICATION AND ANALOGOUS PHENOMENA (ANGINA PECTORIS, ETC.)

Arthur J. Patek, of Milwaukee, cited a case of this rather infrequent disease, the general symptoms of which briefly are: paresthesias of the feet, vasomotor disturbances, and the characteristic motor symptoms; a painful rigidity and loss of power in the legs coming on while walking, the patient being obliged to rest, and recurrence of this paroxysm after walking is resumed. The author dwelt upon the history of this disease since its first discovery by Charcot and cited the literature extant.

The condition is usually due to sclerotic or other partial or complete occlusion of the larger arteries supplying the limb, but may be caused by a vasomotor constriction of the vessel independent of any marked anatomic occlusion, and for the latter reason comparison was drawn with analogous arterial phenomena, of which angina pectoris is the most common type. The theory that many of these painful attacks are in reality due to an angiospasm with relative occlusion of the vessel explains the numerous cases of deaths from angina pectoris in which but a slight degree of coronary sclerosis and no occlusion is found.

The danger of gangrene supervening upon an anatomic occlusion of the vessel was mentioned, and the necessity for acting prophylactically against this contingency. The most important elements in the differential diagnosis of intermittent claudication are the absence of pulsation in one or more of the anterior or posterior tibial arteries, and the intermittent character of the paroxysms. Indulgence in alcohol is probably the strongest etiologic offender in the disease.

Discussion.

Dr. W. H. Washburn, of Milwaukee, said that statistics presented by Dr. Cabot, of Boston, seemed to show that alcohol was not a causative factor in this disease. Trunceck's so-called serum introduced hypodermically in cases of arterio-sclerosis involving cerebral vessels has produced excellent results.

Dr. Wm. F. Wegge, of Milwaukee, believed the term "Intermittent Claudication," as applied to analogous conditions (the heart, brain, intestines, etc.) as mentioned by the essayist, rather unsatisfactory.

ADJOURNED.

Thursday, June 23, 9 a. m.

ESTIMATION OF INDEMNITY IN THE CASE OF ACCIDENTAL LOSS OF ONE OR BOTH EYES.

Dr. H. V. Würdemann of Milwaukee reported that all the Accident Insurance Companies doing business in the United States and Great Britain had been corresponded with and answers obtained.

All the Supreme Court and Appellate Court judgments during the last ten years were noted. American, English and German laws upon the subject are also noted.

Statements as to the amount of injury to the earning ability following loss of vision were made, and suggestions given for accurate determination of same.

Discussion.

Dr. Walter Kempster, of Milwaukee, said that physicians make a great mistake when testifying in courts in using too technical language; they should talk clear English and there will be no difficulty in getting a clear judgment from the jury based upon the opinion of the witness.

Dr. E. Seaman, of Milwaukee, said that the estimates of indemnity were based upon the figures of German specialists. It is impracticable to determine full economic damages by any system of mathematical formulæ alone.

Dr. Würdemann said that economic damage is the principal factor upon which claims at law should be allowed, taking into consideration the factors of pain, anguish, etc.

REGARDING THE LACK OF PROGRESS IN SCIENTIFIC THERAPEUTICS.

E. L. Boothby, of Hammond, makes a plea for a more exact therapy founded on a study of pathological functions; an abandonment of empiricism and proprietary prescriptions as unscientific and illogical, a cleaning out of the obsolete and useless; a revision of the standardization of drugs based on active principles so far as possible, and the use of these active principles in small and often repeated doses based on their physiological action; abandonment of lectures in medical colleges on therapeutics, and laboratory work substituted. He recommends that a capable teacher of therapeutics be employed for clinical work in connection with diagnosis.

Discussion.

Dr. F. R. Weber, of Milwaukee, said: Wonderful progress has been made in therapeutics. We cannot now afford to treat any case of infectious disease without applying the ice bag to the heart. I desire strongly to defend the modern hospital and to state that many children are lost through the folly of parents in refusing to send them to hospitals when occasion requires.

Dr. Boothby: The proper principle of practice is to use active principles wherever obtainable.

THE THERAPEUTIC USES OF THE X-RAY IN DERMATOLOGY.

Dr. Louis Frank, of Milwaukee, gave a brief history of the first applications of the X-ray, and its histological action. Treatment of epithelioma, cancer, acne, eczema, hypertrichosis, sycosis, lupus, psoriasis, keloids and a few non-dermatological cases is dwelt upon, and conclusions arrived at with reference to the applicability and results of the treatment.

Discussion.

Dr. J. D. Madison, of Milwaukee, said: I can confirm Dr. Frank's statements regarding the successful treatment of superficial growths by means of the X-ray. I have not found that the X-ray causes extension of growths beneath the skin, but from a case of cancer of the deeper structures which came under my notice and was treated by means of the X-ray, the effect of the treatment was to restrict the cancerous area, but the result was not satisfactory.

Dr. H. V. Wurdemann: Radio-therapy is turning a portion of the surgeon's work over to the dermatologist and electrotherapist, and is a cure for epithelioma, rodent ulcer, superficial carcinoma and superficial sarcoma, and is a valuable adjunct after radical operation for removal of malignant growths.

Dr. James C. Wilson, professor of Practice of Medicine, Jefferson Medical College, Philadelphia, delivered the Annual Address in Medicine. (This paper appears in the present issue of the Journal.)

IMPORTANCE OF THE EARLY REMOVAL OF ALL NEOPLASMS, WHETHER MALIGNANT OR BENIGN.

Chas. W. Oviatt, of Oshkosh, dwelt upon the frequency with which so-called benign tumors become malignant, and quotes from the very large mass of literature bearing upon this subject. He cites a number of cases in his own experience, and dwells upon the desirability for the removal of moles and naevi.

From the study of cases reported he draws the following conclusions:

1. That women suffering from fibroid disease of the uterus, incur a greater risk in allowing these tumors to remain than in having them removed by competent surgeons.

2. The fact that adenocarcinoma of the body of the uterus occurs much more frequently in cases of fibroid tumor than does cancer of the cervix, leads us to believe that there must be a direct causative relation between fibroid tumors and cancer of the body of the uterus.

3. Every fibroid tumor removed should be subjected to careful laboratory study, no matter what its gross appearance.

Discussion.

Dr. H. A. Sifton, of Milwaukee: The presence of any form of neoplasm whether malignant or benign is a perversion from the normal type, and as the mortality from removal in early stages is very slight, and as benign forms may tend to malignant degeneration, they should be removed at the earliest possible moment.

Dr. Charles Mayo, of Rochester, Minn., said: For 100 years there was no progress in the treatment of cancer until it became recognized that it was a metastatic growth and surgical treatment was changed correspondingly. Many benign tumors develop malignant degeneration from chronic irritation, and therefore early removal of even benign tumors is advisable.

Dr. A. H. Levings, of Milwaukee, said: The conversion of the benign tumor into a malignant one, so far as pathology teaches at the present time, is a rare process, and I would not therefore recommend early operative procedure in many cases of benign tumor.

AFFECTIONS OF THE FACIAL NERVE IN EAR DISEASES.

Dr. Charles Zimmermann, of Milwaukee, stated that the facial nerve becomes, through its course through the temporal bone, largely

exposed to ear diseases and easily affected by them, especially if there exist anatomical abnormalities.

In rare cases affections of the external ear produce facial paralysis, but mostly affections of the middle ear, acute and chronic. Some of the so-called rheumatic facial paralyses are caused by acute middle ear diseases, with less prominent ear symptoms. Further causes are caries, necrosis, tumors of the hearing organ and of the cranial cavity and otitic intra-cranial complications, traumatism, particularly by operations.

The symptoms may sometimes allow of a more definite diagnosis of the localization of the morbid process. The prognosis varies according to the causes. The treatment must be chiefly surgical.

While the literature is extensively utilized, a number of cases of the author's own observation are given as paradigmata of the various types of otogenous facial affections.

Discussion.

Dr. H. B. Hitz, of Milwaukee, said: The small percentage of injuries to the facial nerve are frequently due to the result of rather hasty operative procedure. In operating use only the chisel in removing bone, and do not remove it in large blocks. Neglect of early operation often results in facial paralysis.

CHRONIC CONTINUED SECRETION OF GASTRIC JUICE.

Dr. L. F. Jermain, of Milwaukee, stated that chronic continued secretion of gastric juice is a perversion of function of the stomach, manifested by a secretion of an excessive quantity of gastric juice, not only when the stomach is irritated by food, but also when the stomach is empty. The underlying condition in the majority of cases is a neurosis. The condition is not so uncommon as is generally supposed, especially in large cities where a large part of the population is subjected to influences which tend to depress nerve force and create nervous instability.

Ectasy is more often found as a result of chronic continued secretion than a cause or an existing condition. Little is known of the causes of this perversion of function. Vicious habits of eating and drinking, psychic excitation, neurasthenia, depressing hereditary influence and tabes are given as causes. The gastric mucosa has been found thickened with small cell infiltration under the surface epithelium, extending downward between the interglandular tissue into the submucosa. The symptoms of this disorder vary from mild and occasional dyspeptic disturbances to those which in severity rival an advanced case of carcinoma of the stomach. Pain is nearly always present and is burning, gnawing, occurring when the stomach is empty of food. Vomiting of blood occurs even in the absence of ulceration and gives rise to serious error in diagnosis. Tetany, although rare, is a serious complication. Appetite and thirst are increased. In the diagnosis of this disorder, examination of the stomach 10-12 hours after partaking of any food is absolutely necessary. If a quantity of gastric fluid exceeding 33 c.c. is found which gives a pronounced hydrochloric acid reaction and is present upon repeated examination, the diagnosis of chronic continued secretion is warranted.

Complications such as ulcer, ectasy, pyloric stenosis and tetany render the prognosis unfavorable and treatment much less satisfactory. The treatment consists in correcting bad habits of eating and drinking, gastric lavage, especially in evening and before eating, douching the stomach with nitrate of silver or boric acid solutions, and the administration of alkalies before or with meals. The diet should consist mainly of proteid and gelatinous articles. Carbohydrates, if given in considerable quantity, should be preceded by lavage.

HYDRONEPHROSIS.

Dr. G. D. Ladd, of Milwaukee, gives a description of the conditions present, with the causes, and calls attention to the importance of movable kidney as a cause of recurrent hydronephrosis. The paper discusses the question of the primary condition present, whether distention with urine or congestion is the principal existing factor; also Bazy's statement that hydronephrosis is the cause of loosening of the kidney from its attachments; states the belief that obstruction to the ureter and residual urine in the pelvis of the kidney leads to the formation of renal calculi. The paper takes up the consideration of renal insufficiency as a cause of neurosis; discusses the importance and treatment of movable kidney, with the differential diagnosis of the same; and the relation of enteroptosis to renal insufficiency.

The treatment is chiefly by surgical operation. Nephrorrhaphy, with or without incision of the kidney or pelvis of the kidney, is advised in movable kidney, where there are marked or frequently recurring symptoms.

Discussion.

Dr. Richard Dewey, of Wauwatosa, said that there was a marked association between neurotic conditions and movable kidney, but he did not think the condition was the result of the movable kidney, but simply that movable kidney itself occurs very largely in patients of neurotic constitution and heredity. Patients' pains in connection with movable kidney are largely imaginary.

Dr. D. J. Hayes, of Milwaukee, gave an interesting history of operations on the kidney.

Dr. Edward Evans, of La Crosse, said that if a large incision is made in these cases, the work of the operation is rendered much easier.

Dr. A. H. Levings, of Milwaukee, said that a large number of the cases of floating kidney were congenital.

ANNUAL ADDRESS IN SURGERY. THE SURGICAL TREATMENT OF "DYSPEPSIA."

Dr. Roswell Park, Professor of Surgery, University of Buffalo, delivered the annual address in surgery, "The Surgical Treatment of 'Dyspepsia.'" (This paper will appear in the August issue of the Journal.)

A GLIMPSE INTO THE PAST, PRESENT AND FUTURE OF THERAPEUTICS.

Dr. S. R. Moyer, of Monroe, whose paper was read by title, presents the following abstract: It is generally admitted that therapeutics has always been of least credit to the medical profession; that it has

made the least satisfactory progress of any of the medical branches. It has never received the scientific attention it deserves and for this reason has not kept pace with the progress made in other departments of medicine, especially during the last quarter of a century.

Many eminent medical men are, so-called, therapeutic nihilists, and some are even in favor of abolishing the chair from our medical colleges, as well as do away with the section in the American Medical Association.

One factor tending to lessen the progress of scientific therapeutics is the growing practice of the use of proprietary nostrums by the medical profession. This evil is laid at the door of wily manufacturers in connection with the advertising pages of our reputable medical journals, which assist each other in misleading the over-credulous.

We are at the dawn of a new therapeutic epoch. We can hopefully anticipate almost miraculous surprises by way of further discoveries along the lines of organo- and serum therapy. In fact, recent discoveries encourage the hope that ere another decade is past the general practitioner will have placed in his hands agents by which he can as effectually combat the ravages of malignant diseases like consumption and cancer, as he already can those of diphtheria, rabies, bloodpoisoning and some other infectious diseases; to say nothing of the most extravagant conception of the future possibilities of the X-ray and radium as therapeutic remedies.

SURGICAL TREATMENT OF CIRRHOSIS OF LIVER, WITH REPORT OF A CASE.

Dr. William Mackie, of Milwaukee, gave a general history of the treatment of ascites due to cirrhosis of liver, by surgical procedure. Results from operation have not been satisfactory, and it has been in use only since 1896. Operation late in the disease accounts partially for the bad results, with early operation better results will follow. Medication and early paracentesis should be tried and if they fail, in the absence of advanced renal and cardiac disease with general arterio-sclerosis, operation should be considered. The case of which the history is given was operated on in January, 1903, and the patient is now well.

ON THE ESTABLISHMENT OF AN EPILEPTIC COLONY IN WISCONSIN.

Dr. W. A. Gordon, of Oshkosh, said: There are about 200 epileptics in institutions for the insane in Wisconsin and their influence on the insane is bad and vice versa. The colony is the solution of the problem. Wisconsin is behind the times in this matter.

After much enthusiastic discussion, Dr. Gordon made a motion which was unanimously adopted that the Committee of Public Policy and Legislation be instructed to present to the next session of the Wisconsin Legislature a proposition looking to the establishment of a colony for epileptics in this State.

Friday, June 24, 9 a. m.

A REVIEW OF LARYNGEAL DIPHTHERIA, WITH A REPORT OF CASES.

Dr. P. H. McGovern, of Milwaukee, advocated very large doses of anti-toxin, and said that they are especially and promptly required in cases of laryngeal obstruction. There may be generalized infection in diphtheria just as in pneumonia, yet many cases of generalized infection may be saved by the use of anti-toxin in extraordinarily large doses. In these desperate cases this treatment has reduced the mortality from 20 per cent. to 5 or 6 per cent.

Discussion.

Dr. W. T. Sarles, of Sparta, endorsed what the writer said, and also advised the early use of large doses of diphtheria serum in scarlatinal infection, thus preventing the diphtheria sequelæ causing nephritic trouble.

Dr. Henry B. Hitz, of Milwaukee, said, a case of laryngeal diphtheria is usually a dead case unless you give copious doses of antitoxin.

Dr. G. E. Seaman, of Milwaukee, said, there would be fewer cases of intubation necessary if larger and earlier doses of serum were used.

Dr. McGovern said, nephritis is never the result of the antitoxin, but is the result of the general diphtheritic infection which has not been checked by the early use of antitoxin. Intubation is preferable to tracheotomy if skilfully performed, although the results of tracheotomy in the Glasgow hospital with only 6½ per cent. mortality cannot be excelled.

REPORT OF A CASE OF PERINEO-RECTAL, TRANSVESICAL PERFORATION OF PERITONEUM.

Edward Evans, of La Crosse, called attention to the rarity of mention of wounds of the bladder and to the small proportion of cases of this character among wounds sustained in the War of the Rebellion; whereas formerly there was practically a 100 per cent. mortality in cases of intra-peritoneal wounds of the bladder, modern methods have reduced this to about 50 per cent. Cases of double perforation of the bladder—where one wound involves the peritoneum—are very rare indeed, there being but five reported besides the one that happened in the author's experience.

The case is cited of a boy who was injured by a fall upon a wire nail which tore the perineum, sphincter ani, rectum, trigone, and peritoneum. Immediate laparotomy was performed, the rent in the fundus was closed and the abdominal wound sutured without drainage. The lower bladder wound between the urethra and ureters was closed two weeks later, and rectal wall, sphincter and perineum were repaired.

The boy made a rapid recovery, a vesico-rectal fistula remaining two months. At present he has a perfect anatomical and functional result

The case is a rare one, possibly unique, and demonstrates the happy outcome of early surgical interference.

RADIO-ACTIVITY: ITS THERAPEUTIC APPLICATION.

Wm. Sickles, of Milwaukee, considers in this paper the natural interest of the profession in this subject, and the renewed activity in the field of radio-therapeutics during the past year.

A plain statement of the actual status of radio-activity in therapeutics is given, and the various forms of "rays" used in medicine are carefully differentiated and their physical characteristics described. A short history of the discovery and development of radio-active substances is included in the body of the paper.

The salts of radium of value in the treatment of disease are described and the fact noted that most of the so-called "radium" introduced into this country has been of such a low radio-active power, as to be absolutely useless in the treatment of disease; they have been, in fact, impure uranium salts or refuse from the manufacture of real radium. The technic of Davidson, Holtzknecht, and one or two others in this country, all of whom have had the opportunity of using the more powerful salts of radium, is explained and illustrated.

From reliable reports it can be stated that the radium rays will cure a variety of skin diseases and superficial new growths. Considerable time must elapse before a definite statement can be made as to the place destined to be occupied by radium as a therapeutic agent, but at the present time, except for certain selected cases, the superiority as a factor in the cure of disease rests with the X-ray.

QUANTITATIVE ESTIMATION OF UREA AND ITS SIGNIFICANCE.

Dr. Clarence J. Combs treated of the origin of urea in the body, its antecedents and place of formation, and spoke of satisfactory clinical methods of estimating urea. He also referred to the changes in the amount of urea in disease, and called attention to the importance of watching for such changes, especially in pregnancy.

Discussion.

Dr. D. W. Harrington, of Milwaukee, said, to obtain valuable results the amount of food taken in must be measured. It is of vastly more importance to estimate the amount of urea in the blood than in the urine. In the study of urea we should go back to the liver, as even a diseased kidney will excrete a normal amount of urea. We should differentiate between gout where there is a greater deficiency of urea than in chronic rheumatism, and the latter. Uric acid itself is not poisonous, nor is urea very poisonous. Uric acid is not a retrograde product of ordinary proteids and does not go on to the formation of urea under any circumstances.

SOME METHODS OF HOME MODIFICATION OF MILK IN INFANT FEEDING.

Dr. A. W. Myers, of Milwaukee, gave a brief review of early methods of feeding and of early attempts at modification.

Complexity of the problem. Difficulties in the way of the practical application of the methods advocated by Rotch, Holt, and others.

The simplicity and accuracy of the method introduced by Chapin, and others, of using the "top-milk," obtained by cooling the milk in bottles as soon as milked, and removing certain definite quantities from the upper part of the bottle after it has stood 4-6 hours.

The results of numerous analyses of various milks show that after the cream has risen, as shown by the formation of a distinct layer in the upper portion of the bottle, the top 9 oz. will contain three times the percentage of fat which was present in the whole milk, and the top 16 oz. will contain nearly twice the original percentage.

Attention was called to the fact that the percentage of proteids in milk and especially in cream is considerably below the figures usually given in the text-books.

GENERAL PRACTICE IN NORTHERN WISCONSIN.

Dr. J. P. Cox, of Spooner, described the growth of and changed conditions in practice there; said that the northern country was good for tuberculous patients, and regretted the small fee-bill which oppressed the physician in Northern Wisconsin.

Dr. J. W. Coon presented the *Report of the Committee on Tuberculosis*, recommending co-operation in disseminating knowledge on the subject, and the establishment of sanatoria by the state and by the larger cities.

Report unanimously adopted.

A resolution urging the support of the State Tuberculosis Commission was also passed.

Adjourned.

DOUGLAS COUNTY.

The regular meeting of the Douglas County Medical Society was held at Superior, June 8th, 1904. Nine members were present. Dr. L. B. Shehan read a paper on "Concussion of the Brain," and reported several interesting cases.

Dr. Shehan reported the case of a man who was squeezed between two heavy bodies, resulting in the fracture of the left clavicle and subcutaneous emphysema of the neck on the right side.

Dr. Conkey reported a case of purulent discharge from the external auditory meatus on both sides, accompanied by increased temperature. The discharge ceased on treatment, but metastatic abscesses formed in various locations, resulting in death.

Dr. McGill reported a case of fracture of both bones of the lower part of the leg in two places, producing complete, but simple fractures.

A movement is on foot to establish a credit system among the physicians of Douglas County, but no definite plans have been formulated as yet.

At the last meeting a committee was appointed to draw up by-laws for the society. The committee reported none formulated, but recommended that the delegate be instructed to take up the matter of qualifications and restrictions of membership at the meeting of the State Society.

W. W. Pretts, M. D., Secretary.

OCONTO COUNTY.

The Oconto County Medical Society held its regular monthly meeting at Lena, June 10, 1904, and adopted the constitution and by-laws as laid down by the State Medical Society, and secured its charter.

Dr. Armstrong was elected delegate to the State Medical Society.

Following is a list of officers for 1904: President, C. W. Stoelting; Vice-President, A. P. Voight; Secretary, H. F. Ohswaldt; Treasurer, J. C. Grant.

Dr. Atwood of Oconto presented a very interesting and instructive paper on *Acute Poliomyelitis.* Special attention was given to the symptoms of the early stage. Cases were reported and treatment of paralysis noted. Favorable results were obtained from massage and resistance movements in some of the cases.

Dr. Beffel. Professor of Pathology at the Wisconsin College of Physicians and Surgeons, Milwaukee, gave a very interesting discussion on the pathology of tuberculosis. Special attention was given to heredity and environment in relation to the prevalence of tuberculosis

OUTAGAMIE COUNTY.

The regular June meeting of the Outagamie County Medical Society, which was held at the Falls Hotel, Seymour, on Wednesday, June 1, was in most respects the best meeting that we have had.

After a short address of welcome by Mayor Howard the following clinical material was presented:

By Dr. Holz: A man on whom a gastrectomy for cancer of the stomach had been performed two months ago; a child suffering from abscess of the left lung following resection of a necrotic lower jaw; a baby, three months old, who was deprived of the use of his left arm by a paralysis of the circumflex nerve following a difficult labor in which version was done; and a case of pain without physical signs over the site of a pleurisy which occurred two years ago.

By Dr. Fuller: A boy who had choreic convulsions secondary to laryngeal and gastric trouble; and a man suffering from multiple neuritis.

After a discussion of these cases Dr. Donaldson read a paper on "Infectious Diseases," which, with the discussion, proved most interesting and helpful.

Drs. Holz, Fuller, Shepherd, Foster and Henbest were elected to membership in the society and three applications for admission were received.

After the session the Seymour physicians entertained the society at a banquet and smoker, which would have done honor to many much larger towns. After furnishing such an abundance of scientific material and taking such good care of the inner man, we are pleased to concede to Seymour a permanent claim on one of our quarterly meetings every year.

M. J. Sandborn, M. D., Secretary.

WALWORTH COUNTY.

The Walworth County Medical Society held its third meeting at Elkhorn on May 23rd.

The meeting was called to order by the President, Dr. B. J. Hill of Genoa Junction. Dr. A. E. Henby read a very interesting paper on *Influenza,* which was freely discussed by all present.

The next meeting will be held at Elkhorn, in September.

J. W. Lockhart, M. D., Secretary.

MILWAUKEE MEDICAL SOCIETY.

At the regular meeting of June 14, 1904 there were present 24 members, 5 guests. President Schiller in the chair.

Dr. Hipke presented a paper on *"The relative value of Vaginal and Abdominal examination in Obstetrical diagnosis."* He argued that physicians did not give enough attention to the examination of their patients before parturition. To successfully compete with the midwife practice, he insisted that physicians must use intelligent diagnosis, which the midwife does not do.

Discussion by Drs. Gray, Shimonek, Boorse, Harrington, Elmergreen and Neilson brought out the opinion that neither abdominal nor vaginal examination should be slighted, but that no more vaginal examinations should be made than necessary.

Dr. Shimonek reported a case of *Traumatic Asphyxia,* which occurred twenty-five years before the report. This case was similar to a case recently reported by Beach and Cobb of Boston. Dr. Shimonek's case is the eighth so far reported. The man recovered after venesection.

The report was discussed by Drs. Schiller, Neilson and Elmergreen.

Dr. Foerster reported the details of a case of *Dermatitis Venenata* due to the primrose (Primula Obconica) a rare cause, there being but about a dozen cases recorded in America. The affection had appeared at intervals for a period of four years, and promptly disappeared without recurrence after the removal of the exciting agency.

Discussion by Drs. Mishoff and Schiller.

CURRENT LITERATURE.

DERMATOLOGY.

Louis F. Frank, M.D., O. H. Foerster, M.D.

The Recent Epidemic of Smallpox in the United States.—W. J. Corlett (*British Jour. of Dermatology,* March, 1904), in a well illustrated article, reviews the various types of smallpox and describes those seen in the epidemic which began in 1898. In Ohio the disease was at first not recognized, being called by many "Cuban itch"; it became widespread and in Cleveland changed to a severe type after two years, with a mortality of 20 per cent. Corlett is of the opinion that the mild form was derived from the South, was eradicated by vaccination and that then a severe form, imported from the East, attacked those who had previously escaped the mild form. General vaccination was instituted, and within a year the disease was stamped out.

A good photograph of the mild form is shown. In these modified cases the premonitory symptoms were well marked—vomiting, pain in the back, aching of the limbs, with dizziness and high fever. After three to four days the eruption began. During the invasion a scarlatiniform eruption was frequently observed, usually on the lower abdomen and inside of the thighs, extending sometimes to the axilla and rarely to the back. This premonitory rash left as the true eruption appeared. With the advent of the eruption, the premonitory symptoms all subsided and it was difficult to convince the patient and

his family that the disease was highly infectious and dangerous. The main features of the eruption are the clustering of the lesions around nose and mouth and backs of the hands. On parts covered by the clothing the eruption is discrete—in some instances limited to a dozen or even a smaller number of individual pocks; it usually matures on the sixth day, or even earlier.

A severer form of this type was often seen in which the eruption was confluent on face and hands, and discrete on other parts of the body. It was the occasional appearance of this semi-confluent form which rendered it possible to convince even medical men in some communities concerning the real nature of the disease.

To prevent pitting on the face, cold compresses should be applied early to relieve congestion and prevent the development of the pocks. When suppuration takes place, corrosive sublimate (1:2000) should be added to the iced water and applied as before. It is well to open the pocks at frequent intervals.

In the cases in which the actinic rays were excluded Corlett thinks favorable results were obtained, though further observation is required on this point.

(The disease as it appears in Milwaukee is in some instances even milder than Corlett describes, and the premonitory rash is practically never observed.

(O. H. F.)

Exanthemata, Especially the Scarlatiniform, Appearing After the Injection of Anti-Diphtheritic Serum.—Oberwinter (*Deutsche med. Wochenschr.*, Dec. 17-24, 1903) reports in detail upon the exanthemata observed at the Augusta Hospital in Cologne, following 200 injections of anti-diphtheritic serum (Höchster Serum, No. 3). The general condition was not made worse, nor was acute nephritis or aggravation of an existing nephritis observed after injection.

Locally, at the site of injection, and one to several days after injection, a slightly infiltrated, diffusely reddened or punctate, non-elevated or slightly wheal-like zone was occasionally observed, which disappeared rapidly and was unattended by general symptoms.

Generalized exanthemata, exudative in character, were observed five times: they were morbilliform, or urticarial, or had the appearance of erythema exudativum multiforme, and varied in form in different locations and on different days. They occurred 1, 2, 5, 6 and 10 days after injection and remained for (in the same order) 4, 4, 1, 1 and 4 days. Of these, the first three appeared within a few days of one another, resulted from the same serum series but showed nevertheless marked differences in their course, as concerns time of appearance, duration and form.

An extensive epidemic of scarlet fever existed in Cologne at this time, and in 23 cases presenting a scarlatiniform rash after injection of anti-diphtheritic serum, it was not possible to at once diagnose between scarlatina and scarlatiniform serum-rash. Many of these were later found to be true scarlatina, and Oberwinter formulates the differential diagnosis as follows:

1. The scarlatiniform rashes appearing during the first five days, especially on the third to fifth day after serum injection, are to be judged with great caution, and will, in the great majority of cases, disclose themselves as genuine scarlatina.

2. The initial appearance of the rash at the site of injection is not an absolute indication of its being a serum rash, as this occurs also in genuine scarlatina.

3. In the larger number of cases in which a scarlatina exanthem in genuine diphtheria appears during the first days in hospital, a primary, simultaneous, double infection with genuine diphtheria and scarlatina has occurred. (O. H. F.)

GYNECOLOGY AND OBSTETRICS.

A. J. Burgess, M.D., E. W. Kellogg, M D., G. A. Carhart, M.D.

Report of 972 Consecutive Recorded Cases of Childbirth in Private Practice Without a Maternal Mortality.—HAMMOND (*Amer. Jour. of Obstet.*, June, 1904) gives a very interesting report of a personal experience in midwifery. The average time of labor was 12½ hours. Between 4 and 5 a. m. witnessed the termination of the largest number; 1 to 2 p. m. the smallest.

There were 500 females, 486 males; Vertex Presentations 95 per cent; Breech Presentations 3 per cent; Irregular Presentations 2 per cent.

Chloroform was used in 50 per cent of cases; Forceps in 12 per cent; Lacerations occurred in 25 per cent of all cases; Podalic Version was performed 23 times; Craniotomy was performed once.

There was one case of Eclampsia; 32 children were still born. The list was not lacking in cases of great danger.

The substance of the argument for successful midwifery is: that nature should be given every opportunity, without interference except when necessary. The successful accoucheur has patience, judgment and tact. (G. A. C.)

Gynecological Results of Placenta Previa.—RADKE (*Zentralb. f. Gyn.*, 1903, No. 51) discusses the pathological condition which may follow placenta previa. His material includes 80 cases. 30 per cent. remained sterile owing to endometritis, cervical catarrh or salpingitis. Abortion occurred in 29 per cent. and was traced to endometritis and laceration of the cervix. Only 56 of those who became pregnant bore viable children. The general system of the patient was affected, over 60 per cent. being left more or less unfit for work. Radke is therefore more than justified in saying that patients who have had placenta previa should be kept under observation. (G. A. C.)

Treatment of Puerperal Eclampsia—H. O. NICHOLSON (*Brit. Jour. Obst. and Gynec.*, Jan., 1904) in the treatment of puerperal eclampsia advises the administration of a primary injection of morphine followed by large doses of thyroid extract. Thirty to forty grains may be given at first, and a second dose of twenty grains in six or eight hours if there is no evidence of improvement.

The object of this treatment is to produce symptoms of thyroid intoxication as rapidly as possible. Thyroid substance is an ideal vaso-dilator, and, by this action, promotes elimination by the kidneys and skin.

He reports a case successfully treated in this manner. (G. A. C.)

THERAPEUTICS.

Chas. H. Stoddard, M.D., B. L. Schuster, M.D.

Is Iodid of Potassium a Specific in Lobar Pneumonia?— H. ALTSCHUL (*Med. Record*, March 26, 1904), in sixty-two cases of his own and three times that number in those of colleagues, treated at his request, found a mortality of but 1 per cent., as against the usual mortality of from 20 per cent. to 40 per cent. He argues that when a drug which is rapidly absorbed is well borne in larger doses than when given in health, it is doing some work, as seen in the tolerance for quinin in malaria, iron in anemia, and morphine in the presence of pain, etc.

The effects of potassium iodid are: (1) Antiseptic and antizymotic; (2) increased activity of lymphatic system and absorption of inflammatory products; (3) increased alkalinity and lowered specific gravity of the blood; (4) vaso-dilator action and thus cardiac stimulation; (5) direct cardiac stimulation through its base and by increasing blood to heart; (6) diuretic; (7) diaphoretic; (8) antipyretic; (9) respiratory sedative.

In lobar pneumonia we find (1) toxaemia; (2) diminished respiratory surface in the lung; (3) relative hypoleucocytosis, with reduced alkalinity and increased viscosity of the blood; (4) venous engorgement and laboring heart, with over-distension of right heart and depletion of left, as well as from malnutrition from insufficient and badly aerated blood supply and from badly impaired nerve power (Douglas Powell); (5) impaired action of kidneys and glandular system; (6) pyrexia; (7) cough.

Altschul shows how each of these conditions is affected by the physiological action of the drug and then from his clinical experience, concludes the following:

(1) In none of the cases was there a crisis, the invariable termination being by lysis (ordinarily 80 per cent. terminate by crisis).

(2) The duration of the disease is not shortened.

(3) The temperature, even in apical cases, was never high, rarely exceeding 103°, never above 104°, when treatment was commenced early.

(4) Complications, as endocarditis, pericarditis, edema, embolism, etc., were never met with.

(5) Cerebral symptoms, headache, etc., were prevented if treatment was begun early and disappeared if already present.

(6) In all cases the patient felt more comfortable and seemed less ill than usual.

An initial dose of 10-15 gr., increased by 5 or 10 gr. according to severity, and given every two or three hours day and night throughout the course of the disease is administered. Should there be irregularity of the heart, strychnia 1/60 to 1/40 is given every four or six hours until the heart becomes regular. The iodid is given in 50% solution in milk. When gastric disturbances occur, A. gives aromatic spirits of ammonia, which increases tolerance to the drug, according to a suggestion of Sir James Paget. Our guide to dosage must be the effect upon the heart. (C. H. S.)

HYGIENE AND PUBLIC HEALTH.

U. O. B. Wingate, M.D., W. C. Bennett, M.D.

What Constitutes Vaccination?—As certain quacks have claimed successful vaccination through the administration of some substance which causes no disturbance to the system, it was thought advisable to take this matter up at one of the meetings of the conference of State and Provincial Boards of

Health of North America, and after having had the subject under consideration in the hands of a committee for one year, the Conference promulgated the following definition of vaccination:

"*An inoculation, by scarification, puncture or injection beneath the epidermis, of a vaccine which produces with some constitutional disturbance a typical vaccine vesicle, which leaves, after the pox has healed its characteristic scar.*" (U. O. B. W.)

The Distribution of the Diphtheria Bacillus and the Bacillus of Hoffmann in the Throats of "Contacts" in Normal Persons—G. S. GRAHAM-SMITH (*Journal of Hygiene*, April, 1903) presents the following summary:

1. Diphtheria bacilli have been found in a considerable proportion of persons who have come into contact with cases of diphtheria or with other infected persons.

2. Such persons have been shown to be a grave danger to public health; especially when frequenting schools or institutions, and to constitute the usual channel by which the disease is spread.

3. Very satisfactory results have followed on the isolation of convalescents from the disease and of infected "contacts," where two or more consecutive negative examinations have been required before release.

4. Carefully conducted investigations amongst healthy persons, who have not at a recent date been in contact with diphtheria cases or infected "contacts," have shown that virulent diphtheria bacilli are very seldom (three examples amongst 1,511 persons) present in the mouths of the normal population. This fact renders the discovery and isolation of infected persons a practicable possibility and offers a fair prospect of discovering and isolating the majority of them in any outbreak.

5. Diphtheria bacilli are usually distinguishable on morphological and cultural grounds, but whenever possible it is desirable that their virulence should be tested.

6. The bacillus of Hoffmann is innocuous to man, and is a very common organism in the mouths of the poorer classes. The distribution of this bacillus points to the conclusion that it is carried from mouth to mouth in the same way as the diphtheria bacillus, and therefore its widespread prevalence in schools attended by poorer children is significant, as showing how widely spread and uncontrollable an outbreak of diphtheria may become unless measures are early taken to deal with infected contacts.

(U. O. B. W.)

Duration of the Life of the Tubercle Bacillus in Cheese—In the 19th Annual Report of the Bureau of Animal Industry, Department of Agriculture, Washington, Prof. F. C. Harrison refers to this important subject, and arrives at the following conclusions after much experimentation: "That there is no danger of taking the living germs of consumption into the human system by eating well cured cheese of the common kind. It is important to note that the cheese should be at least three months old and preferably four. The same degree of safety does not apply in case of younger and immature cheese, which seems to be growing in favor in some sections. This affords an additional argument for placing upon every cheese the date when made. It is an excellent custom, already practiced by many good makers." (U. O. B. W.)

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ADDRESS.

THE SURGICAL TREATMENT OF "DYSPEPSIA." *

THE ADDRESS IN SURGERY.

BY ROSWELL PARK, M. D., LL. D.,
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BUFFALO, N. Y.

The terms indigestion and dyspepsia,—like the term rheumatism,—are applied so vaguely and made to cover such a variety of conditions, that I have purposely chosen one of them for a heading for this very reason. We may assume that both are meant to include such symptoms as discomfort after eating, nausea, often actual vomiting, pain —often severe, emaciation, loss of appetite, perhaps change in color of the skin, amounting to more or less jaundice, a host of other and of minor symptoms, plus whatever may be discovered on physical examination, or that of the excreta. For each and all of these there must be a cause. Modern methods of diagnosis have taught us how to recognize and deal with many of them, by means quite outside the pale of surgery, and quite within that of dietetic and medicinal treatment. But modern methods have also done much to reveal how many of the conditions, formerly so vaguely grouped and so empirically treated, are, first, impossible of accurate recognition, or, second, impossible of suitable and successful internal therapy, or, third, accurately recognized only when it is very late, or too often too late to repair damage already done when treated by old conventional methods, so that there has sprung up a general feeling of dissatisfaction therewith, with a growing sentiment in favor of direct exploration, with direct attack if the conditions revealed thereby seem to justify it.

*Read at the 58th Annual Meeting of the State Medical Society of Wisconsin, Milwaukee, June 23, 1904.

The internist—as such—has seen, as it were, one organ after another taken away from him or placed under the joint jurisdiction of the surgeon, until he may almost well feel that scarcely any part of the human body is sacred to the physician or exempt from the surgeon's attack. It is not strange, then, if some evidences of personal feeling creep now and then into discussions of these matters, nor can tradition and custom be instantly set aside when men try to adjust themselves to new relations.

If then one were to begin by saying that ulcer of the stomach and duodenum, cholelithiasis, appendicitis, pancreatitis, and the like, are essentially surgical conditions, to be dealt with by the surgeon, he would be perpetrating an aphorism which he would find many men loath to adopt; while, if he were to insist that cancer of the stomach is a lesion which should be dealt with by the surgeon often long before it is recognized by the physician, he would certainly shock some morbidly sensitive minds, while announcing a great truth. For I believe that cancer is at first a local disease, and that—as I have often said—there is a period in the history of every cancer when if it could be recognized, and if it were accessible, and if it were thoroughly enough removed, it might be cured. But these "ifs" are of tremendous importance, and stand in the way of success in the majority of cases. But by the time cancer of the stomach is really recognized it is usually too late to do anything more than palliate, even by a skillful surgical operation.

But let us assume the condition, which fortunately generally prevails, that practitioners,—whatever their particular bent or tastes,—are honest and sincere men, anxious first of all for the welfare of their patients, ready and willing to advise that which they deem best, needing only to see clearly that in a given case this method or that gives greater promise of success. If to such an one it can be clearly presented that surgical measures offer better prospect that medicinal, then he needs only to be convinced in order to recommend them. To be sure, and at the present day, such conviction may necessarily include the putting aside of all his old teaching and the relinquishment of much that he has long believed and practised. It may also include such surrender of case and fee as may seriously test his absolute sincerity. With that feature of the problem, however, we are not at present concerned, rather only with its scientific merits.

This much by way of introduction. My work as a surgeon specialist has so often brought me in contact with lesions of the upper abdomen, which have proved to be essentially surgical, but which have for months or years been under medicinal care, or even under little

or no care, that I have come to view some of these cases almost with dread, fearing that it be too late, or that a given expedient is now desperate which, resorted to earlier, would have been safe. And I dread, too, the imputation which every now and then some guilty practitioner makes to shield himself: "Well, you had an operation; now see the result;" dread it because our ethical observances do not justify one in retorting, "True, but he died because you advised him against it until it was too late." Over the autopsy table there should be no unseemly wrangling, but the lessons there inculcated should never be lost.

Some of the lessons thus learned I beg to discuss with you on this occasion. And for this discussion let it be confined essentially to four of the contents of the upper abdominal cavity—namely, the stomach, the duodenum, the biliary passages and the pancreas, and to only such lesions of these parts as are now thought by the most progressive, but which will in a comparatively short time be acknowledged by all, to be surgical in their nature; *i. e.*, best or only to be treated by operative methods. I shall confine myself to conditions which are more or less associated with those disturbances so often collectively spoken of as "dyspepsia" and "indigestion." (Hence the title of this paper.)

THE STOMACH.

Cardiospasm.—Not long ago Zenker described a condition of apparently spontaneous dilatation of the esophagus, occurring in middle and elderly life, characterized by difficulty in swallowing which appeared to be caused by an associated spasm of the muscle structures of the cardiac end of the stomach. There results from such spasm more or less cardiac obstruction and esophageal expansion, the lower end of the gullet seems to retain a portion of the ingesta which should find prompt entrance into the stomach. This amount may in time equal a half litre, and patients have even died of inanition without minute inquiry into the condition which causes this. It is a lesion which corresponds to pyloric obstruction and must be dealt with after the same mechanical fashion, though, to be sure, plastic operation has there been substituted for the older dilatation by Loreta's method. Such method is still applied at the cardiac end of the stomach, as Mikulicz and others have shown, and a considerable series of cases now brilliantly illustrate the benefits to be obtained in cardiospasm through surgical operation and through it alone.

Pyloric Obstruction.—The question of the possibility of a congenital stenosis of the pylorus is perhaps still under discussion. The

best and most recent reports seem to be that such condition is possible, and in 1901 there were some forty examples on record. Regarding the symptoms of this we need not be detained here, yet they show the possibility of such condition as perhaps explaining intractable vomiting in the very young. Operation has been successfully performed on an infant of eight weeks, and there are several successful reports concerning infants not much older than this. Naturally, the operation of choice in any such case would be a posterior gastroenterostomy. In so young a patient this should be performed entirely by the suture method, and no artificial help (*i. e.*, button) should be employed.

Gastric Ulcer.—This constitutes a very common and unpleasant, often distressing, and sometimes fatal lesion for which medicinal treatment may be justified early, but for which, in serious cases, there is no real cure except that afforded by surgery. It is not intended here to study its causes, but a few words explaining the condition itself would not be amiss. These lesions are usually spoken of as simple erosions, acute round ulcer, and chronic ulcer. The erosions have not had their share of popular attention, because they are often so apparently trifling as to be neglected. They may elude what seems to be a careful search during operation and they are likely to be overlooked during the ordinary post-mortem examination. They may be so small as to be barely perceptible and may assume the type of fissure, and yet from so insignificant a lesion most alarming hemorrhages may result. This gives them an importance quite disproportionate to their size, and I am sure it is not generally appreciated what serious results may occur from so apparently trivial a crack in the mucosa. These lesions are most common in the pyloric end of the stomach, for obvious reasons. The acute or subacute round ulcer is more often found in women, while the chronic form with its irregular outlines and thickened edges is more often seen in men.

Three of the significant symptoms of ulcer are pain, vomiting, and hematemesis. The pain is located in the epigastrium and radiates not infrequently toward the back and region of the left shoulder. It is produced by the ingestion of food. Vomiting takes place usually within an hour after food-taking, and by it the stomach contents are usually completely expelled. Bleeding is much more frequent in the acute than in the chronic type of ulcer. In the slow and insidious cases of chronic ulcer pain may not occur until an hour or two after filling the stomach. Vomiting is irregular, often large in quantity, and the vomitus is often of the coffee-ground type, sometimes fetid; this depends to a considerable extent on the amount of dilatation of the stomach and the type of fermentation of its contents. In the

slowest cases the symptoms are very irregular. The most chronic cases are more likely to have pyloric obstruction and dilatation.

In nearly all these cases a great amount of tenderness in the epigastric region and sometimes enlargement and thickening of the pyloric region can be made out, in addition to evidence of dilatation which a careful physical examination will furnish. The pain and tenderness are usually quite well localized, more so than in many other abdominal conditions. An ulcer of the anterior surface of the stomach, near the cardiac end, will cause tenderness along the left costal arch and median line and will be relieved by the horizontal position, while an ulcer of the pyloric end gives tenderness to the right of the median line and the pain is relieved by lying on the left side and increased by lying upon the right. With an ulcer of the posterior wall, the pain is felt in the back and beneath the left shoulder blade. When there are firm adhesions to the liver, the pain radiates under it and in the direction of the right shoulder. When the pain is severe vomiting is rarely absent, and this act usually gives prompt relief. One must not forget that there are also so-called "latent ulcers," which give rise to very few symptoms until something alarming suddenly happens.

While mild cases of suspected gastric ulcer may be amenable to non-operative treatment, a serious and alarming manifestation, such as hemorrhage and intense pain, should be followed by operation at the earliest practical moment. No one can foretell exactly what it will be necessary to do, and so one should be prepared for anything that may be required. The English surgeons, of whom Robson and Moynihan are the most conspicuous in this work, seem to rely almost entirely on gastroenterostomy and do not recommend opening the stomach and searching for the site of the ulcer, but my own experience with this method, though small as compared with theirs, has been so satisfactory that I could not personally advise against an exploration, at least in select cases. The ulcer, if found, may be excised or curetted, and the surrounding area closed with sutures; or there might be found such adhesions to the liver, for instance, as to make it inadvantageous to detach these, but make it wise to proceed at once to anastomosis. On the other hand, unless the adhesions are relieved, the patient will not be freed from the radiating pain toward the right shoulder, of which he has probably sorely complained. A reasonable effort, then, should be made to free the pyloric region from anchorage, and if during the process the stomach or duodenum be opened sutures may be used freely and anastomosis be made for protection. With anastomosis performed, as Moynihan has taught us,

in an antero-posterior or vertical direction, so that there shall be left no retaining pouch of the stomach, the relief afforded is complete and, as it appears, final.

Pyloroplasty has been almost abandoned by the gentlemen I have quoted above, and yet, here again, I have seen beautiful results which make me loath to entirely give it up.

The simple suture method, without complicated instruments and such aid as the metallic button, and the like, are certainly the most adaptable for this purpose. The opening can be made as large as desired, and there is no necrotic process upon which one has to rely for the success of his operative venture. Of course, all that is said here with regard to gastric ulcer is intended to apply more positively to its complex forms, some of which are serious and some of which are promptly fatal unless skillfully operated. I am dealing rather with the general phase of the subject which leads one to say, speaking as a surgeon, that every case of diagnosed and every case of suspected gastric ulcer would better be operated, providing, of course, the patient can be placed in proper hands.

Gastric Dilatation.—Of the extent to which this lesion may go, I do not need remind you. Of course, it is most frequent and excessive in pyloric obstruction or cases of torsion. The greater the amount of dilatation, the less hopeful the case from the non-operative side. Dilatation is to be suspected when there is an increase of thirst with poor appetite and an almost constant feeling of dryness in the throat, when considerable amount of gas is expelled from the stomach, and when these symptoms accompany an almost constant feeling of oppression or soreness in the epigastrium. Vomiting is a feature of the advanced cases and may be a daily or less frequent action, the rejected matter showing evidences of decomposition and free hydrochloric acid. When in such a case, in spite of regular lavage and a properly regulated diet, there is no improvement, then the operation of gastroplication is indicated and will be almost always successful. The process is almost simplicity itself, exposing the patient to very little risk and giving great prospects of relief. It consists in taking a series of tucks in the stomach wall by which its capacity as a retaining bag is very much reduced.

Gastroptosis was first described by Glenard in 1885, and is often called by his name. It may occur along with the displacement of other organs. By virtue of its change of position the stomach may become obstructed at its pyloric end and thus a vicious circuit be established, from which there is small relief save by operation. Duret

was the first surgeon to suggest this relief, which he afforded by suturing the lesser curvature to the abdominal fascia. A gastroplication might also be easily combined with this gastropexy.

Cancer of the Stomach.—Obviously, if the surgeon be of much use in such case he must deal with primary cancer and with one not too far advanced. The extraordinary infrequency with which cancer transgresses the pyloric boundary of the stomach is fortunate for the surgeon, but a feature which no one yet has been able to explain. Adhesions and lymphatic involvement are present in at least one half of the cases. Probably five-eighths of a large total of cases of gastric cancer will be found to involve the pyloric region, but cancer may be met with at any point of the stomach wall. It affects males more commonly than females and is ordinarily spoken of as a disease of late middle or advanced life, yet it has been observed in an infant of five weeks and operated upon in the twentieth year of life. These cases vary much in their acuity and are often divided into the acute and latent. So rapid may be the course of such a lesion, in rare instances, as to destroy life within three months from the first recognizable symptoms. On the other hand, they may run an exceptionally long and almost latent course, like some cases of cancer of the breast.

Inasmuch as cancer is a disease which has no essential symptomatology, so here it is only as one function or another is disturbed by the advance of disease that there arise either symptoms or signs. As a rule, they do not appear until the disease has made considerable encroachment and consist then of vomiting, pain and presence of a tumor. In the presence of these three it is rarely difficult to make a diagnosis, but by the time they are present it is often too late to accomplish much by surgery. The earlier symptoms are vague and misleading, and include what is ordinarily meant in the popular expression "dyspepsia." There is also included a certain amount of discomfort, with occasional nausea and malassimilation of food, which, of course, means loss of strength and body weight. These symptoms will, of course, depend to some extent on the location of the lesion, this being true also of the gastric ulcer; for instance, the formation of hydrochloric acid and pepsin seems to take place rather in the middle zone of the stomach, and the size and location of the cancer may explain the absence or presence of free hydrochloric acid, upon which so much stress is laid, but which at the same time proves so unreliable in recognizing the disease. A cancer located near the pylorus will cause obstruction much earlier than one at a distance. Thus it may happen that obstruction symptoms with dilatation form the most pronounced early indication of gastric disorder. Cancer

high up near the cardia will produce few early symptoms. By the time it can be positively recognized the patient is too far advanced in the disease to justify anything more than a palliative operation. According to the degree of dilatation and the movability of the stomach will be the size and location of the tumor when recognized. If adherent to the liver, as it often is, it may be located fairly high up in the abdomen; on the other hand, the stomach may be so stretched out of shape as to carry it below the umbilicus, where it might be mistaken for something else were not lavage or distension intelligently practiced. In many respects a dilated and movable stomach may be operated more easily, especially about the pylorus, than a case characterized by firm adhesions, in which case radical operation is rarely of benefit.

After all, the principal matter in these cases is to resort to surgery early rather than late, for which probably we still need a means of early diagnosis which is not yet forthcoming. Almost the best that can be said is that one may suspect the presence of cancer without being able to prove it; and this leads me here to emphasize, and I desire to make the emphasis as strong as possible, that in my opinion a well-founded suspicion of cancer of the stomach, as well as of various other organs, amply justifies an operation intended, first, for its discovery or determination, and, secondly, for its relief. It is hardly worth the time here to go into the chemistry or tests by which this suspicion may be strengthened. I care not by which method the conclusion or the suspicion is arrived at, nor do I care whether the diagnosis wavers as between cancer, ulcer or benign tumor. The rule will apply equally well in the less malignant lesions and the happier will the surgeon be in its application.

Ulcer of the Duodenum.—Duodenal ulcer has many characteristics similar to those of gastric ulcer, the pain and tenderness being rather vague, with occasional sharp spasms or stitches upon any sudden action, like turning quickly or sneezing. The hemorrhage from this source may escape either through the stomach and mouth or by the bowels, but in no case is it likely to be so fresh as when it takes place from a gastric ulcer. The pain which follows the ingestion of food will not follow so early, since it is not produced until the food begins to enter the intestine. Moynihan, in 1901, showed how in 18 cases out of a total of 49 a diagnosis of appendicitis had been made and operation undertaken for that condition. This fact cannot be regarded as entirely due to inattention to the possibility of duodenal ulcer, since the complaint of pain is often vague and its

reference to the lower part of the abdomen is quite common. Moynihan has also emphasized what I have myself seen,—namely, that in addition to ulceration of either the stomach or duodenum there occur minute erosions, barely recognizable even on close scrutiny, which open up bloodvessels, and that there occur so-called "weeping patches" with various other indeterminate conditions.

When a long train of so-called dyspeptic symptoms is followed by exacerbation with sudden access of pain, more or less faintness or collapse, and especially by vomiting of blood or melæna, and when there is tenderness in the region of the upper abdomen, we may well suspect a duodenal ulcer which has given away. In some respects the extent of the perforative lesion is in proportion to the acuity of the symptoms. That perforation does occur more often than is generally suspected is doubtless the case. If it be minute, by a localized peritonitis, in some instances, a protective wall is quickly formed which prevents the invasion of the general peritoneal cavity, and leads to adhesions which shut off the diseased area, while they at the same time cement the viscera together. Various operators have reported such adhesions which make it apparent that something of this kind has happened. With a diagnosis of perforating ulcer it would be extremely hazardous to postpone exploration in the hope that this might occur.

When actual perforation does occur the symptoms are overwhelming, and sometimes one is confused by their resemblance to those which are common to several of the acute lesions of the upper abdomen. This is not the place to go into a differential diagnosis between perforating ulcer of the stomach, phlegmonous gastritis, perforating ulcer of the duodenum, obstruction by internal hernia, mesenteric thrombosis, volvulus, acute gangrenous pancreatitis and destructive lesions about the biliary passages. All of these conditions have many symptoms in common and in difficult cases without accurate history it is impossible to come to a definite conclusion as between two or three of them. If one takes too long to study and decide such a case, the patient may die before the conclusion is reached. All of these conditions, however, except mesenteric thrombosis, are surgical, and rather than lose time differentiating between them it would be better to call in immediate surgical aid. In this case the physician should rest content, at least at first, with recognizing the gravity of the situation, it being no discredit if one cannot decide in the presence of such confusing symptoms: but, on the other hand, it is discreditable if one fail to appreciate the futility of drugs in such instances.

THE GALLBLADDER AND DUCTS.

While the ordinary form of catarrhal obstruction of the ducts is doubtless, as held in time-past, most commonly due to trouble spreading upward from the duodenum, and of evanescent character, it must be remembered that extension of trouble from the liver may also produce it, as well as (which is more to our purpose) carcinoma, gallstones, pancreatitis and hydatids. In cancer of the liver, *e. g.*, jaundice is a variable sign, depending, perhaps, on an associated catarrh, which may be benefited by treatment while the more serious condition goes unrecognized, at least for a time.

Chronic catarrh of the ducts is associated with dyspeptic symptoms in practically all cases, even of gallstone and cancer, and is frequently the active factor in producing jaundice. It may lead to the production of exceedingly tenacious thick mucus which obstructs the passages, and gives rise to much pain in passing the narrowed channel. Indeed, the suffering of actual gallstone colic can be imitated during the escape of this dense viscous material. In such a case either drainage or cholecystectomy would give relief. In fact, it being impossible to differentiate such an attack from a real gallstone case, and the remedy being alike efficacious in both conditions, no hesitation should be felt in urging operation. Mayo Robson advises gentle irrigation with warm water for a fortnight or so after drainage, in order that the ducts may be the better emptied of their accumulations.

Just as we have an obliterative appendicitis so we may have an obliterative cholecystitis, the gallbladder shrinking to a fraction of its former size, perhaps almost disappearing, being often surrounded by adhesions, giving thereby pain which will be radiated often to one side of the chest or to the other, according as the lower aspect of the liver is involved or the pyloric extremity of the stomach. Here, in this shut sac, no matter how imprisoned, as in the closed appendix or any other shut sac, there is constant production and absorption of toxins of some description, as Dieulafoy has shown, and the degree of toxemia thereby produced may be quite disproportionate. Moreover, the irritation is constant and nagging.

The apparent relation between this catarrh and so-called croupous or membranous enteritis was noted in 1820 by Powell, and recently by Jonathan Hutchinson. Mayo Robson inclines to the view that the cause of the painful attacks followed by slight jaundice is the formation of membrane within the biliary passages, which partially obliterates them, and so sets up spasm of the gallbladder. In fact, complete casts of the gallbladder have been thus formed and passed, in

several instances (Mayo Robson, Diseases of the Gallbladder, 3d. Ed. p. 76). If in such cases error in diagnosis should occur and the gallbladder be exposed without the discovery of gallstones, its removal or its drainage would nevertheless be indicated and would give relief.

Bacteria may reach the gallbladder by the ducts, the most common route, through the blood, or by direct passage through its walls, the last being exceptional. Colon and typhoid bacilli are the principal intruders, and both are known to be facultative pyogenic organisms, according to the degree of their virulence and the susceptibility of the patient. Mixed infections may here often be found. Alone or in conjunction with calculi they may produce empyema or fulminating gangrene. A local catarrh by itself is not necessarily followed by empyema, but a catarrh plus bacterial invasion will always occasion serious mischief. Here we have loss of appetite, malaise, local soreness, loss of flesh and chills with fever. This condition has too often in times past been regarded as a combination of malaria and indigestion, in spite of the fact that tenderness is always localized, and is an expression of localized peritonitis. There will often be found a thickening or tumor under the tender area.

The dangers of such a case are somewhat proportionate to its intensity, the greatest of them being perforation and sepsis. Rupture and final escape of pus may occur through the diaphragm, into the liver, into any of the hollow viscera or into the peritoneal cavity.

Aspiration for purposes of diagnosis is exceedingly hazardous: a small opening for exploratory purposes, to be enlarged as circumstances may require, is the life-saving procedure in such a case as this.

When Courvoisier first described gangrenous cholecystitis, in 1890, under the term "phlegmonous inflammation," it was supposed to be an exceedingly rare condition, and he could assemble only seven cases. We now know it as a condition quite analogous to acute gangrenous appendicitis, and have learned that under rarely favoring conditions the gallbladder can go to pieces as rapidly and as totally as that other superfluity, the appendix. Such trouble commences usually with violent pain and vomiting, like most of the acute lesions in the regions under consideration; respiration is rapid and thoracic, depression is marked, tympanitis increases, and there are all the indications of local peritonitis. Jaundice may or may not be present, and fever is an unreliable feature. When gangrene occurs it may be due to thrombosis, bacterial invasion or tension.

Given a due appreciation of the nature and gravity of this condition, does it need a surgeon to insist upon the necessity for the promptest possible intervention? Granting even the impossibility of

accurate diagnosis, should it not be everywhere insisted that such a case is not one for the delay even of an hour's experimentation with drugs? Such a case is essentially one for the surgeon from the hour of the first complaint of pain.

So, too, are even the milder cases of cholangitis, whether it follow chronic pancreatitis, hydatid disease, lumbrici in the ducts, strictures, calculi or malignant disease. These cases are usually characterized by spasmodic pain at intervals, perhaps for years, without jaundice, followed by other spasms, during or after which comes temporary jaundice. Then come attacks of pain followed by chills and perhaps high fever. Tenderness and irregular rigors succeed, and the liver, especially the right lobe, may enlarge, while the gallbladder itself is not usually detected, being often much contracted. The occurrence of chills with slight jaundice and sometimes splenic enlargement will cause this lesion to be frequently mistaken for malaria. The complications most to be dreaded are extension of infection, abscess formation in the liver or gallbladder, involvement of the veins, of the pancreas, or extension of trouble to the thoracic viscera. While the presence of gallstones is the most common cause of suppuration in the ducts, hydatid disease in those parts of the world where it prevails, other parasites, cancer, and the two very common general infections, typhoid and influenza, are by no means to be disregarded.

In any condition of this kind, whether acute or chronic, drugs are futile; relief can only be afforded by evacuation and drainage. By this measure septic material is removed, calculi, if present, are taken away, chemosis of mucosa-lined passages is allowed to subside, circulatory equilibrium is restored by relief of pressure, and the kidneys are relieved of the additional burden of excreting biliary material.

Furthermore, and unless conditions are too acute to justify it, adhesions which have both disturbed function and caused referred pains may be separated and general comfort be thus afforded. Perforation of the gallbladder or of the ducts is not so much within the scope of this paper as the conditions which precede and lead to it, but may be mentioned here as one of the dangers to which the physician deliberately exposes a patient when he allows him to go on with vague "dyspeptic" symptoms for which he cannot account.

Intestinal obstruction from gallstones which have escaped is another of these dangers. Acute obstruction from this cause has been considered quite frequent, being placed by Osler as high as one case in thirteen, or by Barnard as one in forty-five cases. Whether such a concretion has gradually made its way along the natural passages, or has produced intense colic and volvulus, or has taken a short course

by ulceration, it certainly is fair to say that in every such instance there must have been such frequent or chronic complaint of symptoms referred to the stomach and upper abdomen as to have amply justified exploration.

Of the cystic distensions of the gallbladder, with or without leading symptoms, there are very many cases. In time past it has been a too frequent custom for physicians to treat patients solely on their own descriptions of their ailments, and therefore many an enlarged gallbladder or other suggestive tumor has passed unrecognized for want of careful physical examination. This reproach on the methods of the past will not much longer be deserved; still it cannot yet be quite omitted.

A distended gallbladder is of itself not so much a disease as an indication of its past or present existence. If it be accompanied by absolutely no symptoms it may be regarded as a menace, but perhaps be allowed to remain under observation, with due caution given to the patient. Else, and with the existence of symptoms, it should be regarded as indication for operation; as much so as a tender enlargement in the region of the appendix. When existent it can usually be detected, though a great deposit of fat or a very rigid and tender abdomen may cause uncertainty. Rarely I have been in such doubt as between it and a floating kidney or a renal tumor that not until exploration was the matter finally settled. In any such case, however, operation of some kind is equally indicated, even though its exact character is only to be determined at the time. Extreme tenderness is one of the great difficulties in making these examinations, but such tenderness in and of itself amply justifies exploration.

Cancer of these parts may be often suspected, but rarely positively recognized until hopeless. The general remarks made elsewhere in this paper may apply here as well. That if recognized reasonably early and if radically removed, the patient may apparently be cured, is well illustrated by a case of my own, a woman about forty years of age, from Lockport, N. Y., who had been under treatment for indigestion and that sort of thing for a long time. When a tumor was finally discovered, she was sent to me. Exploring I found a very large and thick hourglass gallbladder, with a large calculus in each compartment. It was bedded in the liver by a zone of tissue which resembled cancerous tissue, and which the microscope later showed to be cancerous. The mass with a goodly portion of apparently normal liver tissue surrounding it was removed, the cautery being used for the purpose. This was nearly four years ago, and the woman is today apparently well, her only complaint being of a ventral hernia. (The

opening was large, the patient being corpulent, and large provision for drainage was made.) Such a case as this would seem to justify my claim that cancer is, at least at first, a local disease.

Another feature of considerable importance in cases of calculous disease is enlargement of the liver, especially of the right lobe. When recognized it may be regarded more seriously than it deserves, or it may be a sign of cancerous invasion. In connection with gallstone disease, and particularly with a contracted gallbladder, my attention was first directed to it by my colleague, Dr. Stockton. In many cases it seems to be an evidence solely of hepatic engorgement and in these it quickly subsides after surgical relief of the obstructing cause.

Naturally, the most common of the conditions now under consideration is cholelithiasis. It is estimated that 5 per cent. of mankind have gallstones, from whose presence they may or may not suffer; in some parts of the world the proportion is much larger. With their origin and physical characteristics we have not here to do. But inasmuch as they figure very largely among the causes of intractable dyspepsias they must interest us greatly. That they may occur at any age is not generally enough appreciated. They have even been noted during the first six months of infancy, and between the twentieth and thirtieth year they are far from uncommon. I have had a number of cases, particularly in young women, during this period. At all periods of life they are certainly more common in females. That gallstones may be present in the gallbladder during a large part of a long life and not be recognized is also true.

That they are in many instances the cause or one of the causes of many cases vaguely termed dyspepsia, indigestion, colic, and the like, is now undoubted by those who are well informed, though sufficient stress is not yet placed upon such undeniable facts as to give them their proper importance.

Irregular attacks of paroxysmal pain, often without apparent provocation, radiating from the right hypochondrium or epigastrium toward the right shoulder blade, accompanied or followed by nausea, vomiting or collapse, and followed or not by jaundice, with or without perceptible tumor in the region of the gallbladder, constitute the classical signs of gallstone colic, to which should usually be added a limited abdominal rigidity. In such cases as these diagnosis is not difficult, and one has simply to resign himself to regard the case as surgical.

But it is in cases when symptoms and signs are not classical that both the conscientious and well informed man may easily waver as to whether the stomach, the duodenum, the biliary passages or the pan-

ereas is at fault. Is he to continue to waver, or is he to accept the new teaching that the various lesions as between which he is in doubt are all best recognized and best treated by surgical methods, which, begun as explorations, are concluded by whichever of the expedients now known to surgeons may seem best fitted to their nature and needs?

Cholelithiasis is in effect a surgical disease; temporary relief may be in some cases afforded by internal therapeutics, but this prospect is very vague, and concerns mainly the wealthy and the idle, for whom it is too often fallacious.

The frequency with which gallstones are associated with pyloric stenosis or the old lesions of gastric ulcer constitute an additional reason for operative attack. Furthermore, the frequent association of chronic pancreatitis with stone in the common duct, and the notable relief afforded by removal of the calculi, lends another most forceful argument in favor of operative attack.

In the relatively few (14) years that have elapsed since Courvoisier first successfully removed a stone from the common duct, immense strides in technic have been made, and a well-founded suspicion of calculus anywhere along the biliary passages is now not only sufficient excuse but ample reason for its removal. This is justified not alone by the relief afforded, but by the decreasing mortality rate of the best operators, which is today surprisingly small.

Of operative methods I do not propose to speak; rather of general principles. Personally, I have advised complete removal of the gallbladder, in addition to such further work as may be called for, when this can be accomplished without too greatly complicating the case. I have based this on the facts that it is an essentially superfluous organ in man today, whatever it may have been in past ages in man or animals; that like the appendix and other vestigial remains it is prone to go wrong on slight provocation; that when it does go wrong it becomes a source of offense which has little or no excuse for existence, and consequently that its loss entails no sacrifice but often greatest benefit, and can often be effected without perceptibly enhancing risk. But I certainly would not advise or practise its removal in any instance where this would apparently jeopard the result.

THE PANCREAS.

The intimate relations between the head of the pancreas and the second part of the duodenum afford an easy explanation for disease traveling in either direction from one to the other, while the peculiar relations between the biliary and pancreatic ducts will account for double or even tripartite lesions. Moreover, the pancreas is easily

invaded by ulcer or cancer of the stomach, as well as of the duodenum. Were it my purpose to speak of acute diseases of the pancreas I should say more about the anatomical relations of these parts, in order to indicate how pus may burrow, and to show that practically all diseases of this viscus are surgical in the sense that they are amenable only to surgical relief. Doubtless this will sound like a bold statement to men of the old school, but will be challenged only by those who still believe that the pancreas is an organ of almost unknown function and so placed as to make it sacred from the profaning hands of the surgeon. But inasmuch as I am trying hard to confine myself to those disturbances which upset digestion, and only incidentally or occasionally jeopard life, it will not be necessary to go further in this direction.

It is unquestionably true that the common bile duct is often compressed by the head of the pancreas, by which mild but chronic jaundice may be induced. When this yields to medicinal treatment, as it perhaps may in the beginning, well and good; when it becomes chronic there is no relief save by surgery. Pressure on the pancreas and on its duct, conversely, may be produced during the passage of a gallstone down the common duct; by such pressure again there is more or less obstruction within its subsidiary ducts and backing up of pancreatic secretion. This predisposes it to infection, either from the duodenum or from the infected bile passages, and thus a chronic pancreatitis is produced. In either event a vicious circle is established, and a condition set up which is only relieved by affording physiological rest; *i. e.*, by opening and draining the biliary passages, at the same time removing any calculi which may be met with.

But how are such conditions to be recognized and the indications for surgical intervention made clear?

We must first of all remember that the pancreas is so constructed and protected that it is almost exempt from primary disease. On the other hand, it is peculiarly disposed to secondary involvement which is nearly always an infection,—from the liver and the bile ducts as well as from the duodenum by open highways, or at least highways that once were open from the stomach and from the colon and the abdominal lymphatics by contact or proximity. Mayo Robson has emphasized, moreover, that every function of this organ can be vicariously assumed by some other organ save, perhaps, its glycogenic activity. The stomach can take care of the albuminoids, the salivary and intestinal glands of the starches, and fats can be emulsified by bile and intestinal juices. Furthermore, as in the case of the thyroid, a portion of the organ seems to be as serviceable as the whole, since nearly all

of it may be destroyed by necrotic or other morbid process without apparent loss to the patient.

But to return: by what signs and symptoms may we recognize or even suspect pancreatic disease?

Dyspeptic disturbances include anorexia, flatulency (often with offensive eructations), discomfort after eating, nausea, acidity, disrelish for fats and meats. Emaciation is nearly always a feature. The more acute the type of trouble the more marked become the nausea and vomiting. (Of course, in acute pancreatitis "black vomit," *i. e.,* altered blood, is seen earlier than in any other condition.) These features should naturally lead to more minute study, not only of the patient, but of the excreta. Naked eye appearances of stools are fallacious. Fat occurs in the stools, as Mayo Robson reminds us (Hunterian Lectures on Diseases of the Pancreas, *London Lancet,* March 19, 1904, *et seq.*) in three forms: as fat droplets, fatty acid crystals and as soap crystals. Moreover, steatorrhea may be met with in jaundice and in enteritis as well; when these coëxist there is much fat in the stools. Consequently the presence of fat in the stools is only pathognomonic when the other conditions are not present, unless there is discovered at the same time a peculiar reaction in the urine, to which I shall allude again in a moment. When, however, there are present in a case evidences of steatorrhea with that faulty digestion of albuminous materials, to which is given the name azotorrhea (undigested muscle fibers, and the like, in the stools), and when the urine contains sugar and gives the peculiar pancreatic reaction, and when especially in addition to these signs any enlargement may be detected in the region of the head of the pancreas, then a positive diagnosis can be made of chronic interstitial pancreatitis.

Hypersecretion of saliva has been noted in some cases of pancreatic disease, it being apparently not only a reflex, but a vicarious act. The so-called pancreatic diarrhea is also significant, when present, it being due to want of digestive power and the propulsion forward of bulky and undigested food. Colorless stools without jaundice should always make one suspicious of pancreatic disease, the absence of color being due not to absence of bile but presence of fat. (Walker, Brunton.)

The pancreas is badly placed for furnishing plain physical signs of disease, especially in stout patients. Nevertheless, it is often possible, especially with the patient in or just removed from the hot bath, and with a warm hand, to feel perceptible enlargement. And often when this cannot be accomplished, one can at least elicit expressions of pain and tenderness which are of themselves significant as

indicating something wrong. Further study of such a case will usually indicate that this something would be best more clearly defined and recognized by surgical exploration. In the case of pancreatic calculi tenderness without pain may be elicited.

In the presence of new growths there may be produced on the vena cava such pressure as to cause ascites as well as distension of the gallbladder, or even jaundice by pressure on the hepatic duct. In such cases the mystery can only be solved by exploration. From our point of view, however, no case should be allowed to go on to such an extent without it.

Another feature of interest in some of these cases is tendency to general hemorrhage from all exposed raw or mucous surfaces as well as from vascular ruptures into organs and tissues, particularly into the pancreas itself (pancreatic apoplexy). Of course, this is due to alterations in the blood, not yet sufficiently studied, but certainly in part characterized by diminution in the number of blood plates and by enfeebled coagulability. In this condition, particularly emphasized by him, Mayo Robson's advice to give large doses of calcium chloride (30 to 60 grains) three or four times daily, should be followed, since this salt has a marked effect in increasing coagulability.

So much has been already said about jaundice as an indication for operation in all chronic and many acute cases that it is hardly necessary here to point out its significance when pancreatic disease is suspected. Glycosuria is a matter of even greater importance. When present it is to be interpreted as meaning that the islands of Langerhans are involved, *i. e.*, that the pancreatic lesion is of interstitial and interacinous type; whereas in diseases of rather the interlobular type these islands are not encroached upon, at least not until late, and so they escape. Glycosuria, then, is significant when detected, but its absence gives only negative value to the test. So, too, in cancer, when only a part of the pancreas is involved, it will be absent.

Much is to be hoped for from a new reaction which Mr. Cammidge has but recently described (The Chemistry of the Urine in Diseases of the Pancreas, *London Lancet,* March 19, 1904), but has been putting to practical test for some years, and in which our best authority, Mayo Robson, seems now to have quite implicit confidence. By means of this he seems to be able to determine as between malignant and nonmalignant pancreatic disease, and thereby to have greatly assisted the surgeon, since many conditions suspected to be cancerous can thereby be shown to be nonmalignant, and the surgeon's sphere of usefulness thereby enlarged. This test is too complicated to be here described, but my personal acquaintance with and confidence in

both Mr. Mayo Robson and Mr. Cammidge, incline me to feel that they have largely added to our resources by its introduction.

Of pancreatic cancer, cysts and calculi, I hardly need speak here in detail. Whether certainly recognized or sincerely suspected they should alike be given the chance which only the surgeon's knife affords.

But it is right to stop and answer the question surely prompted by the above statements. What can surgery offer in these rather numerous cases of chronic pancreatitis and allied conditions?

First of all, exact diagnosis, and this will of itself afford great comfort though the condition revealed be inoperable.

Next, direct access can be made to not only the biliary passages, but to the head of the pancreas and its ducts, if necessary, by opening the duodenum and directly exploring the duct of Wirsung, or for the removal of calculi. In the majority of cases, however, it will be found necessary and at the same time sufficient to open and drain the common duct, of course removing any calculi that may be discovered, and not resting until a probe has been passed completely through it and its patulency reëstablished and demonstrated. In a goodly proportion of cases it will prove sufficient to do a cholecystostomy by which there shall be afforded opportunity for drainage and antiseptic irrigation. At other times a cholecystduodenostomy will be indicated, by which bile may be more easily poured into the bowel. Behind all these procedures there are the underlying motives of affording not only direct outpour of obstructed secretions, but physiological rest. After their performance appetite returns, digestion is resumed, body weight increases, jaundice disappears, pain and tenderness subside, cachexia disappears, and for a condition of general ill-health is substituted one of vigor and general welfare which no amount of drugs or time spent in dietetic "cures" could accomplish. True, this is effected at the expense of operation with its attendant dangers. In the hands of our best surgeons these risks are now so small that they should cut no very large figure in deciding as to the best course; nevertheless, they can never be left out of account.

In conclusion I would summarize thus: operation is indicated in:

Gastric ulcer.—Either gastrotomy with direct attack upon the involved surface, or gastroenterostomy (posterior), to afford rest and a more direct outlet.

Gastric dilatation. — When lavage and the customary internal measures have proved disappointing, and always when pylorostenosis exists.

Gastric cancer.—Early, if possible, hoping to effect a cure; when late it may be still possible to make a gastroenterostomy which shall

prolong life. In the most advanced cases, one may have to be content with a jejunostomy for temporary purposes.

Gastric anomalies.—Such as hour glass stomach, and the like.

Pyloric obstruction.—Here one must choose as between excision with end to end reunion, pyloroplasty, or anastomosis, preferably posterior.

Duodenal ulcer.—Here a posterior gastroenterostomy is clearly indicated.

Duodenal cancer and duodenal stricture.—Of these also the same is true.

Biliary obstruction.—All chronic and many acute cases, whether due to intrinsic or extrinsic causes (cholangitis, gallstones, cancer, old adhesions). In these some operative intervention is imperative; whether it shall consist of extirpation, opening and drainage, or anastomosis, depending on the conditions revealed through the exploratory incision.

Pancreatic disease of almost every type, whether acute or chronic. In the former, posterior drainage must usually be added to the attack from the front. In the latter, it will usually suffice to open and drain the biliary passages; rarely a cholecystenterostomy may be called for.

Finally, in all cases of acute pain in the upper abdomen accompanied or followed by vomiting, especially of recent or old blood, by tympanitis, muscle spasm and collapse, and in all chronic cases of pain and tenderness in the region described, with a history of recent and particularly of long standing symptoms, of emaciation, dyspepsia and indigestion, with or without perceptible tumor, but with rigidity of the rectus and other abdominal muscles,—in all of these, I say, I would urge surgical exploration, after due preparation, and under circumstances which may allow the surgeon to resort to every technical and life-saving expedient known to the art. This advice is given as the result of convictions that steadily strengthen as experience accumulates and with a sincere belief that when it becomes general routine, as it is sure to in time, the greatest good will be done to the greatest number.

ORIGINAL ARTICLES.

THE CLINICAL COURSE AND DIAGNOSIS OF ARTERIO-SCLEROSIS.*

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Introduction. It is suggesting no new thought to say that arterio-selerosis is a general disease involving the vessels of the entire body and that organic disease of very varied kinds may result from the vascular disorder. This was the conception of Gull and Sutton and it has been universally recognized, though it must be confessed the profession is slow to incorporate the view in its every day practice. Physicians are prone to look upon cases from the point of view of the part or organ presenting the most obvious symptoms, and take little account of general conditions of a somewhat intangible kind. We find ourselves, somewhat like our patients, unsatisfied with a diagnosis that does not lay the charge of a progressive disease upon some particular organ. I recall a striking instance to which my attention was called a number of years ago. A prominent official in Washington had been examined by three well known physicians on account of rather obscure symptoms, and each made a report in writing. The first said the patient had an organic disease of the spinal cord, the second that he had valvular heart disease, the third that he had an aneurism of the abdominal aorta. As a matter of fact, the patient did have evidences of all three conditions (perhaps a cirsoid aorta rather than an abdominal aneurism), but none of the three recognized the whole clinical picture or the important fact that the man's real disease was arterio-sclerosis, with several local manifestations. The same sort of error is constantly made with respect to kidney and heart disease, and not rarely, when disorder of the two organs is recognized the bond of connection is undiscovered or unheeded. A principle in diagnosis of fundamental importance, but often unapplied, is that which directs the physician to discover a unity of causation when a number of pathologic conditions are seen. The body is not more disposed to interdependence in its physiologic operations than in pathologic processes, and a multiplicity of entirely

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distinct diseases is always unlikely, while correlation may properly be assumed until good reasons are found for believing that several conditions are wholly distinct. Among the fundamental conditions most frequently found operating to the production of apparently distinct diseases, the four of prime importance are, infections, disturbances of metabolism, nervous disturbances and arterial disease. Under the operation of any one of these causes, widely divergent clinical manifestations and often the occurrence of seemingly distinct though coincident diseases may be observed.

In the case of the chronic infections, long familiarity with the diverse conditions met with, especially in tuberculosis and syphilis, have may us forgetful of the fundamental importance of the bearing of underlying causes on widespread disease. In the case of acute infections a beginning has been made by the discovery of the direct relation of such conditions as arthritis, pneumonia, cholecystitis, etc., to the primary disease. Formerly such complications were thought the result of the original disease only in the sense of consequences to which that disease had predisposed the patient.

In the case of metabolic diseases the protean character of gout has been more or less appreciated since the days of Sydenham, but there is a wealth of unexplored ground in the case of other disorders of metabolism.

In the case of nervous disease, the secondary results of neurasthenia (whatever the original cause of this may be in the individual case) may be recalled. Gastric and intestinal atony with characteristic physical signs, gastroptosis, myocardial disturbances with heart murmurs as well as irregular action, disturbances of urinary excretion and other conditions may be the direct results of the neurasthenic state; and in these days when the prevailing tendency leads to the recognition of some visceral disease as the cause of neurasthenia, it is well to appreciate that the nervous condition thus initiated not rarely determines other organic derangements as well as increasing that which was fundamental.

In the case of arterio-sclerosis, the views of Gull and Sutton have long been accepted, but in practical medicine the physician is prone to be forgetful.

It is the part then of accurate diagnosis (and upon such accuracy of diagnosis alone can successful treatment rest) to determine the fundamental condition in every case and to appreciate the mode of operation by which the secondary conditions have been superadded.

The relation of arterio-sclerosis to senile decay. The remark has been frequently made that man is as old as his arteries and that dis-

ease of the arteries is the beginning of all of the changes that constitute senile decay. There is reason, however, to doubt the accuracy of this view and to indicate that in purely physiological senescence, pathologic changes, among which atrophy and degeneration are prominent, begin in all of the tissues without special reference to the blood vessels. I cannot now enter largely into this subject, but it is important because I believe there is an essential difference between normal senile decay and pathological arterio-sclerosis. In the latter, according to my view, certain definite causes, such as vices of living, poisons, or infections, primarily affect the vascular system profoundly without directly involving the tissues of the body generally. There results a disproportioned disturbance in the vascular system as contrasted with senility, a more rapid course of the disease and eventually far more destructive lesions in the organs. It may for the sake of distinction be well to consider the pathological type by the name of *presenile arterio-sclerosis.*

Presenile arterio-sclerosis. Etiology. The causes of arterio-sclerosis in the young and middle-aged are fairly well known and may be described very briefly. In the first place, I shall refer to causes that are not generally placed at the head of the list, since these are undoubtedly of importance and require emphasis. The wear and tear of life must be recognized as one of such causes. Arterio-sclerosis is becoming more common as the complexity of modern life is increased. Nerve-strains, cares, and multiplied responsibility acting in conjunction with late hours, overfeeding and other causes, render the business man of the day more prone to premature senility than was his father who lived a quieter and more rational life. Statistics bear this out, as I have elsewhere shown (*University Medical Magazine,* Oct. and Nov., 1900; *American Medicine,* Jan. 2, 1904). I am convinced that the conditions of life just referred to are themselves the active cause in some cases, but often they operate in conjunction with other causes, such as overfeeding, the abuse of alcohol, syphilis, and severe physical exertion.

Another factor of importance is infectious disease. It has been recognized by pathologists that acute infectious diseases, such as typhoid fever, frequently cause acute inflammatory and degenerative changes in the blood vessels, but the after results of these lesions can not, for obvious reasons, be studied pathologically. The view has generally been expressed or implied that such changes are repaired when convalescence is established. There is, however, some reason to suppose that remote results leading to arterio-sclerosis may follow such acute vascular lesion, with perhaps an interval of considerable dura-

tion in which no evidence of vascular disease can be found. More often, I believe, the remote effects of the infectious vascular disease is some condition of the blood vessels that makes them more prone to early sclerosis under the operation of other causes, such as those before enumerated. In the same way a patient may seemingly have recovered entirely from an acute myocardial degeneration of infectious origin, but develops chronic (fibrous) myocarditis, the foundations for which doubtless were laid by the earlier condition.

Heredity is another cause to which more attention should be paid as a cause of arterio-sclerosis. In some families, early senility, myocardial disease, cerebral hemorrhage, etc., evidence the tendency to arterial disease. The original stuff of which the arteries were made is of a low order, as Osler suggests.

Pathological anatomy. I shall not discuss in detail the morbid anatomy, but must refer to certain parts of the subject which have a very direct bearing on the clinical course. In an advanced stage of the disease marked changes are found in the intima and media of blood vessels in all parts of the body. These changes may be in localized areas or diffuse, though in the majority of cases a combination is met with. From the clinician's point of view a distinction of the two types is of little importance. The disease affects the aorta more strikingly and doubtless more frequently than other arteries; it may in exceptional cases, be limited to certain arteries. As a rule, this is only apparent, the arteries generally being affected, but in a more diffuse and therefore less obvious fashion than those specially noted. Not only the main trunks, but the arterioles and capillaries also are involved in the disease, and the differences in their pathological lesions are merely the result of differences of anatomical structure. In studying the smaller arteries, the media is usually found thickened and more or less degenerated. This is perhaps the first alteration of structure. Whether this is the result of changes in and around the vasa vasorum, as Köster first claimed, and this condition, in turn, the consequence of direct action of toxic agents, or whether the change in the media is a result of continued or repeated over-pressure, resulting from increased viscosity of the blood or arterio-capillary spasm due to toxic agents, or the consequence of other causes, remains to be determined. It is quite certain, however, that the first obvious change in the artery is this in the media. Degenerations and ruptures in the tunica elastica* are soon, if not coincidently, established. Following these changes, the intima becomes thickened. This may be diffuse

*W. M. L. Coplin has recently published some interesting observations in this connection.

and considerable, even to complete occlusion of the vessels, or circumscribed and nodular. The last named change is most pronounced in the large vessels, and in its final stages causes the formation of the well known atheromatous patches, ulcers, etc.

Practical physicians are less interested in knowing the precise anatomical alterations in the later stages than in the beginnings of the disease. It is of the greatest importance to know whether the first increase in the media is the result of over-pressure due to spasm caused by irritation of toxic substances or of primary involvement of the capillaries and vasa vasorum. The solution of this question would settle for us the question of whether or not there is a pre-sclerotic stage in the disease—a stage of over-pressure and disturbance of organic functions before the arteries had become diseased. Those who oppose this view regard continued excess of blood pressure the sign of already established arterio-sclerosis, and deny the possibility of a continued over-pressure, as a result of increased viscosity of blood or arterial spasm. While I cannot subscribe to the view that continued high pressure is a certain indication of established arterial disease, I am disposed to believe that too much weight has been given to the matter of over-pressure, especially by the English writers. It seems to me quite probable (and I base my view on the general conditions of the tissues and on organic actions) that there is a primary stage of disease of the capillaries and vasa vasorum during which the arterioles and larger vessels are in a state of relaxation and reduced pressure, before the stage of disease of the media and continued high pressure is reached. In this preliminary stage there is habitual low pressure, with paroxysms or periods of spasm. I have in mind cases that have under my observation passed through successive periods up to the full development of undoubted arterio-sclerosis. In the earlier stages these patients have suffered from paroxysmal attacks of migraine, pains in the limbs of a drawing character (such as I shall describe later), temporary and slight edema, and in the end they have become cases of pronounced arterio-sclerosis. As an habitual condition, they have had at first every evidence of reduced pressure with temporary attacks of decided hypertension, coinciding for the most part with their attacks of migraine, vague pains, etc.

When we approach the matter of the alterations in the intima, we meet with the attractive theory of Thoma that the thickening of the inner coat is entirely compensatory, being the reactive effort of nature to fill in the gap occasioned by the relaxation of the weakened (degenerated) media. Attractive as this theory may seem (and I am disposed to accept it as partially true) we cannot bring it into har-

mony with the fact that marked changes are met with in the intima of small arteries and arterioles at a stage when the media is far from degenerated, and when any widening of the channel must have been merely occasional and the result of functional relaxation only. To some extent I believe that the thickening in the intima is the result of direct toxic irritation or reactive to the changes in the tunica elastica.

THE CLINICAL COURSE.

While the normal arterial degeneration of senility is an essentially chronic disease, the pre-senile type may be characterized by a comparative acuteness which contrasts strongly with the physiological form.

Acute arterio-sclerosis. I do not wish to intimate that there are cases of this condition which are actually acute, but rather that in comparison with the usual course, either of the senile or the pre-senile type, certain cases are very rapid in their development and fatal termination. We see this in men of middle life, who have been successful in affairs, and who have been accustomed to free and generous living and have paid little heed to the warnings that they have strained their endurance and physical powers beyond legitimate bounds. Unexpectedly, in the lives of such persons, there may come a severe shock, a business failure, or some great personal loss, and from that moment the various organic functions seem to fail. The individual loses weight, the circulation becomes inadequate, palpitations and other cardiac symptoms are complained of, and digestion becomes sluggish, troublesome, and altogether deficient; disturbances of the renal function may also occur. These symptoms develop so rapidly, the loss of weight is so striking, and the patient's decreasing vitality so prominent a symptom, that the appearance is presented of a very acute, and even that of a malignant, disease. In several cases of the kind I mention I have known the suspicion of a deep-seated malignant process to be entertained and only dismissed when the autopsy had revealed the real conditions and the absence of malignancy.

While I have designated this as an acute form, it will be recognized from what has been said that I mean only an acute termination of a disease which probably had been existent, but latent for a long time. The real duration of the trouble can never be accurately measured, since its beginnings are so obscure.

Chronic arterio-sclerosis. The onset of pre-senile arterio-sclerosis is always a gradual or insidious one, and it is rarely possible to discover the precise time when its foundations were laid. I have already

said that I believe in some instances infectious disease, and especially typhoid fever, may cause the primary conditions in vessels which years afterward advance under the operation of further causes. Somewhat in the same way excesses of all kinds or strains endured during the youthful period of life may establish the beginnings of an arterial disease that subsequently, when the powers of reaction and of compensation become impaired with advancing years, increase to a pronounced disease. Not only are the earliest symptoms vague and unobtrusive, but they differ as widely in different cases as do the symptoms of the fully developed disease. There is a general basis of similarity in all cases, but the conspicuous symptoms are so varied and at times so little suggestive of a vascular disorder, that the onset is not recognized as that of arterio-sclerosis. So much can be said from an analysis of the early history of cases which come under our observation with the well developed disease. I must, however, confess that I have frequently sought in persons of this kind to determine the earlier manifestations, by careful inquiry into the past symptoms, and have only rarely been rewarded with data of any special value.

Clinical types of advanced pre-senile arterio-sclerosis. Before considering the general symptomatology of this disease, and before discussing the earlier manifestations, I wish to review briefly some of the advanced forms in order to establish a basis of comparison between what is commonly recognized and what must as yet be regarded as unsettled. There are certain types of well marked arterio-sclerosis that cannot be overlooked by the intelligent physician. With these established and kept in mind, I believe it is possible to trace backward the history of cases to the earlier stages, and I have found it profitable to trace the development of the disease in this manner, when the patient has been under my observation continuously, or at intervals during that period of life during which his disease was developing. For convenience of classification I wish to refer to the following varieties: 1. Thoracic, including those with cardiac and those with aortic manifestations. 2. Cerebro-spinal, including those of diffuse and more or less moderate type and those in which excessive change in certain vascular areas has caused pronounced symptoms. 3. Abdominal forms, including renal, intestinal, pancreatic, and hepatic varieties. 4. The simple arterial or arterio-capillary type.

1. *Thoracic forms.* Of these I may mention particularly the cardiac and the aortic variety.

(a) Cardiac variety. Among the arteries which may be affected early and before the general arterial system is much involved, the coronary arteries take a particular place, not only on account of this

more or less solitary involvement, but also on account of the seriousness of the results. Arterio-sclerosis of the mouths of the coronary arteries and of the walls of these arteries is the most frequent cause of all forms of degenerative diseases of the myocardium, and has a practical monopoly of causation of the more serious types of degenerative disease of the heart muscle. In the beginning a failing circulation in the coronary vessels occasions weakness and irregularity of action of the heart, together with an irritability that causes a more vigorous action under slight emotional or physical stimulation. Later thoracic oppression, a sense of heaviness over the thorax, and subjective dyspnea may occur, and these symptoms lead naturally to the development of typical angina pectoris. Between the milder symptoms of the beginning and the pronounced anginoid condition there are all grades of severity and many varied types of symptomatology. I cannot now enter into any detail regarding these, but have outlined the character of symptoms simply to establish the connection between such symptoms and the arterial disease.

(b) Aortic variety. When the brunt of the arterio-sclerosis affection falls upon the root of the aorta, as it so frequently does in those who have followed a laborious life or who have been subjected to inordinate nervous strains, the symptoms may be not unlike those referred to under the head of cardiac variety, but there is, as a rule, a greater tendency to the early development of such clinical symptoms as will be later referred to, under the head of the general arterial form. These symptoms are explained by the fact that the arteries throughout the body are prone to be considerably affected in these cases, though not so conspicuously as the aorta. The occurrence of marked cardiac symptoms in cases of the aortic type is referable to the disturbed coronary circulation, which may be the result of the disease of the aorta or more particularly in many cases to involvement of the mouths of the coronary arteries. In some cases the aortic disease occasions spurious anginal symptoms with persistent pain under the manubrium sterni and radiating to the right as well as to the left shoulder, and without the evidence of involvement of the heart muscle that is so often seen in true angina. These cases are especially liable to painful attacks when the patient makes any physical exertion, and the pain may, with some probability, be referred to the resistance of the diseased aorta and the over-action of the heart, when the latter is not weakened by any myocardial disease.

2. *Cerebro-spinal forms.* There are cases, as was intimated before, of cerebral arterio-sclerosis, in which the symptoms are vague and uncertain. It is probable also that disease of the blood vessels

is an important factor in certain definite diseases like paralysis agitans and general paresis. With these, however, we have little present concern. Other cases present themselves with various clinical manifestations, such as transient monoplegias or more extensive palsies, spasmodic conditions with clonic convulsive movements, and even generalized epileptiform attacks. The true cause of these paroxysms in arterio-sclerosis has not yet been determined. They may be the result of temporary spasms of the vessels, of thrombosis, or of the consequences of these conditions.* It is important to recognize the possibility of severe epileptiform attacks as a possible result of arterio-sclerosis affecting the cerebral vessels. The fact that in such cases a certain amount of albumin may be present in the urine, and that disease of the aorta is often detected, may lead to the assumption that the attacks are uremic on the one hand or embolic on the other. There are cases, however, in which neither of these possibilities can be accepted, and I wish to refer to one such case recently under my observation. The patient, with evident advancing arterio-sclerosis associated with some myocardial weakness and a slight albuminuria unaccompanied by tube casts, was seized with a convulsion, which was followed by a temporary monoplegia of the right arm, affecting the upper arm in particular. After a few days this monoplegia subsided and his condition was practically the same as before the attack. Subsequently he suffered from a number of similar attacks, some of which were followed by transient palsy and others were entirely free of this complication. Towards the end of his life, which finally resulted from a severe attack with increasing cardiac asystole, albuminuria increased in proportion to the amount of cardiac disturbance, but at no time did the symptoms correspond in any degree with the apparent renal condition; the latter seeming entirely commensurate with the failing circulation. There was not at any time the appearance of uremia in any particular, save the occurrence of convulsion and stupor. Embolism could not be positively excluded, but seemed improbable on account of the frequency of the attacks, which numbered altogether six or eight, and on account of the failure of any durable symptoms following the attacks.

A second type of cerebral arterio-sclerosis is that which is more frequently observed in truly senile cases than in the pre-senile forms. In these the disease in the cerebral vessels as determined by autopsy is found to be extreme, and certain vessels are more or less completely obstructed. The resulting conditions are those so well known under

*The purely peripheral nature of some cases of spasm or convulsion movement is not denied. Such cases, however, are exceptional.

the old name of cerebral softening. Loss of memory, failure of other mental functions, and finally childishness, or fatuity, are the conspicuous indications.

Spinal arterio-sclerosis is probably the underlying cause of certain varieties of myelitis and of conditions usually attributed to other causes.

3. *Abdominal arterio-sclerosis.*

(a) Renal Type. The relation of chronic interstitial nephritis to arterio-sclerosis is well recognized. It cannot be asserted that this disease of the kidney is invariably due to disease of the arteries, but with the exception of cases of chronic interstitial nephritis following other varieties of renal disease, such as parenchymatous nephritis, and with the exception of certain rare cases in which it is probable that an acute interstitial nephritis acquired during an infectious disease subsequently terminates in the chronic form, practically all cases may be referred to a primary arterial degeneration. On my own observation, I would assert that fully 90% of the cases of chronic interstitial nephritis are primarily arterial in causation. It is unnecessary to enter upon the symptoms of this affection, but it is important to recognize that there are moderate symptoms of renal irritation or disturbance of function for a long time before actual or considerable disease of the kidney has become established. I shall have occasion later to refer to the premonitory symptoms in connection with the earlier manifestations of arterio-sclerosis.

(b) Intestinal Type. It is not as generally recognized as it should be, that the intestinal tract suffers from arterio-sclerosis. As an example of the most advanced form of this intestinal disease I would recall certain cases of intractable chronic colitis, which are met with in the aged, with advanced arterial disease. In my experience in the Philadelphia Hospital I have seen numbers of such cases and have followed them through long periods, up to the fatal termination and the autopsy. When interstitial nephritis is present, this may be an important factor in determining the intestinal symptoms, but it must be recognized that the arterial disease, which affects the branches of the mesenteric arteries more frequently than is allowed in Rokitansky's figures, alone is capable of producing the chronic intestinal disease I refer to. In these cases not rarely the small intestine also is involved and erosions or even distinct ulcerations of the mucous membrane are present in a considerable proportion of cases, particularly in those in which interstitial nephritis accompanies the other disease.

Another form of intestinal disturbance that is not often referred

to, has come under my observation. In this variety, sudden attacks of cramp-like character followed by continued abdominal soreness and diarrhea that is controlled with difficulty, are the conspicuous symptoms. Ortner (*Wien. klin. Woch.*, Bd. 15, No. 44) has referred to such cases under the title "Intermittent Angio-sclerotic Dyspragia of the Intestines." He compares it to an intermittent claudication and refers especially to the intermittent character of the abdominal symptoms. One of my cases occurred in a gentleman, aged 76, who had several such attacks located in different parts of the abdomen; the last, being in the region of the appendix, not unnaturally occasioned the suspicion of appendicitis. Fortunately the age of the patient prevented an operation, and in a short time the attack, like those which preceded it, subsided, and the terminal diarrhea was soon controlled. In several other cases in younger subjects I have seen similar sudden attacks of intense abdominal pain of a probable spasmodic character. I need not add that the diagnosis of such a condition could never be made without the greatest care to exclude other possible causes of intestinal cramps, and especially inflammatory diseases like appendicitis.

(c) Pancreatic Type. It is necessary to refer to this more particularly than to call attention to the fact that some instances of pancreatic disease associated with diabetes have been found to be forms of pancreatic sclerosis associated with arterio-sclerosis. Chronic interstitial pancreatitis unassociated with diabetes cannot be positively recognized, though disturbances of intestinal digestion, causing alternating constipation and diarrhea, fatty stools, lipuria, and other symptoms, may result.

(d) Hepatic Type. The liver is not often diseased as a direct result of arterio-sclerosis because its principal supply of blood reaches it through the portal vein, a channel not prone to sclerosis. Involvement of the terminal branches of the hepatic artery might naturally occasion periportal sclerosis, as it is the periportal tissues in particular that receive the blood supplied by the hepatic artery, but certainly cirrhosis of the liver is not conspicuous among the organic diseases resulting from general arterio-sclerosis.

4. *Arterio-Capillary Form.* There are many cases of advanced arterio-sclerosis in which the evidences of arterial disease are unmistakable, but in which the general health of the patient has suffered very little and in which there are practically no symptoms or signs referable to special organs. These cases most nearly resemble the cases of normal senility, and are abnormal only in the time of occurrence of the disease, its rapidity of evolution and the disproportioned arterial

disease as compared with atrophy of the other tissues. Continued high tension, throbbing pulses, a sense of vascular fullness, heart beats, audible in the patient's ear when lying in bed, tinnitus aurium, a proneness to vertigo, and an appearance of anemia without real anemia, are the most obvious characters.

Early manifestations of pre-senile arterio-sclerosis. With this brief and inadequate outline of the conditions found in the later stages of arterio-sclerosis before our minds, we may proceed to a consideration of some of the conditions which may be discovered in a study of such cases in their earlier clinical course. For the sake of convenience, though with no thought of completeness, I would distinguish several type-forms of onset, namely, 1, *a nutritional type;* 2. *a nervous paroxysmal type;* 3, *a neurasthenic type.*

In considering these I wish to emphasize the fact that the symptoms here referred to are symptoms antedating manifestations of distinct organic disturbance.

1. *Nutritional type.* One of the most frequent conditions seen in certain cases of arterio-sclerosis is a general appearance of disturbed general health. Among the manifestations of this are: (a) an appearance of anemia or what might be termed pseudo-anemia, (b) a gradual loss of weight, and (c) proneness to disturbances of digestion, or possibly of other functions, and to acute infective or inflammatory diseases.

(a) Pseudo-anemia of arterio-sclerosis. In its pronounced grades this condition occasions the well-known facies of arterio-sclerosis which is so characteristic that it cannot be overlooked, though in its earlier stages it may not be obvious to the patient himself. In a great number of cases under my own observation, both early and late, the appearance of the patient has suggested a moderate or even a severe anemia, but examinations of the blood have shown normal numbers of red corpuscles and a normal percentage of hemoglobin. This paradoxical condition is precisely the same as that which has been found in the examination of the blood of Europeans who have resided for some time in tropical countries, notably in India, and which has occasioned the name of *spurious tropical anemia.* The cause of the apparent anemia is most probably to be found in a narrowing of the blood vessels of the skin. Whether there is added to this an element of viscosity of the blood, with the retention of the corpuscles at the periphery, cannot be positively determined without further investigations, and whether the narrowing of the vessels mainly affects the arterioles or the capillaries cannot as yet be answered. The important fact, however, must be recognized that

apparently progressive anemia without alteration in the blood count or the amount of hemoglobin is significant of arterial disease, though not of course pathognomonic.

(b) Loss of weight, to which reference has been made, is not so frequent as is the change of color; in some cases, however, particularly the "acute" forms, it is a conspicuous manifestation. I believe that in large part it is due to the desiccation of the tissues. In the very earliest stages of arterio-sclerosis I have reason to believe that there is an abnormal moisture of the tissues, perhaps the result of vascular relaxation and increased permeability of the capillaries. In several cases under my observation, and among others some in physicians who naturally have been close observers of their symptoms, a transient slight edema over the tibia and forehead has excited alarm. In these cases the tissues, in general, were flabby, and the subcutaneous tissue especially seemed more or less soggy. When the disease advances, and the permeability of the vessels perhaps grows less from increased sclerosis, it is not improbable that this early moisture may be removed and a desiccated state of the tissues may result. This would be accompanied by loss of weight, such as has been referred to.

(c) Regarding the functional disturbances and intercurrent diseases to which I have alluded, I can give but a few general observations. I have found that in individuals suffering with early arterio-sclerosis the gastric digestion is easily disturbed, so-called attacks of biliousness more prone to occur, and migrainous attacks more frequent when the patient had been liable to them before. Whether these conditions are the result of disturbed metabolism, or simply disturbed digestion, or whether they are the consequence of localized arterial involvement, remains to be determined. A rather more important matter is the liability to intercurrent disease. Individuals with beginning and established symptoms of pre-senile arterio-sclerosis become especially prone to attacks of bronchitis of obstinate character which may perhaps be due to the involvement of the circulation (cardiac weakness), but I believe are in many instances the result of a lowered state of general vitality and a condition of general nutritional disorder. The liability to such attacks is, I have found, a distinct condition of the pre-senile period.

2. *Paroxysmal nervous type.* Among the manifestations of this form I believe that migraine should rank foremost in frequency and importance. I am far from asserting that this symptom is invariably the result of actual arterio-sclerosis. It seems probable that nutritional disturbances may occasion arterial spasms with consequent symptoms of migraine, but it is more likely that such occurrences

would prove severe and durable in those in whom the arteries have been impaired. Many of the cases of arterio-sclerosis of quite early development, that I have seen, have been in individuals subject to these attacks. Painful sensations in other parts of the body of a similar character are also met with, though less frequently. I recall an instance in which a man of 50 developed severe paroxysmal pains in the lower thoracic and upper lumbar regions, which were attributed to ordinary lumbago or to renal calculus, but which in the light of the subsequent development of marked arterio-sclerosis, terminating in angina pectoris, I now believe were arterial phenomena. We are ordinarily little inclined to look upon disturbances of the arterial circulation as capable of producing pain, and yet clinical experience in cases of embolic blocking of the peripheral vessels or of rapid thrombosis of such vessels teaches how intense the pain of arterial blocking may be. In some cases that I have seen the pain has been of a lightning like character and has caused the patient suddenly to lose power, and when standing and when affected in the lower extremities, suddenly to fall to the ground. A description given in one instance by the patient himself was that it seemed as if he had suddenly been struck a sharp blow with a cane or some such implement. Shooting pains that accompany senile obstructions of the vessels in the legs, and which precede senile gangrene, are of similar etiology. There are, however, many instances of early arterio-sclerosis in which these marked forms of pain are not observed, but in which the patient has more vague, diffuse and neuralgia-like attacks, which he sometimes describes as of a drawing or twisting character, and which may actually be accompanied by cramps of the muscles.

3. *Neurasthenic type.* In the third of the varieties which I have named the patient's earliest symptoms are referred to the nervous system rather than to the blood vessels. There seems to be a condition of relaxation of the whole system. Nervous manifestations, paroxysmal sweating, attacks of polyuria, and apparent or real depression of blood pressure mark these cases. Sometimes, in the instances of "acute" arterio-sclerosis to which I have referred, the first symptoms are of the type now under consideration, and the patient may be regarded as a subject of pure neurasthenia or "nervous prostration." Soon the increase of the disease and especially the occurrence of distinct organic lesions, such as interstitial nephritis or myocarditis, makes the more serious character of the affection apparent.

Diagnosis of pre-senile arterio-sclerosis. I have elsewhere* discussed the diagnosis of arterio-sclerosis and will quote from that discussion the physical signs and objective phenomena.

*American Medicine, Jan. 2, 1904.

"The first effect of loss of elasticity of the blood vessels must be an impediment to the easy circulation of the blood, an increase in the work of the heart, and a consequent increase of blood-pressure. If the normal blood-pressure were a fixed amount, and if there were no causes of frequent or even habitual increase of peripheral vascular tension, the recognition of this early stage might be easy; but we know that in its infinitely complex system of compensations the circulation is adapted to varying conditions at the periphery or center, and in the very first stages of arterio-sclerosis the blood-pressure may be possibly lowered instead of raised by the relaxation of the diseased vessels, either as a result of the direct weakening of their walls or of the action of vasodilator mechanisms. Such a preliminary lowering of blood-pressure is probably quite temporary and rather occasional than constant during the brief term of its existence. Soon the pressure becomes increased and remains so with only occasional depressions. In the late stages of the disease, heart weakness from myocardial degeneration may become pronounced and a durable and serious reduction of pressure may develop. This, however, is a final phase, in which we have no special interest to-day. It may be said, then, that elevation of blood-pressure is an early condition of arterio-sclerosis, and in the review of every case that I have been able to study from the beginning this has been an invariable symptom. The means of determining this are the study of the pulse by the finger, the character of the first heart-sound at the apex and the second sound at the aortic area, the sphygmogram, and the results obtained with some instrument for recording arterial pressure. I need not review the features that indicate increased arterial tension to the palpating finger. These are well known to all of us. The character of the first heart-sound is, however, less commonly appreciated. The increased difficulties of the circulation cause an early lengthening and an increased heaviness, from augmented muscular action, of this sound, and these characters are often sufficiently clear to be readily appreciated by a trained ear. Later the peculiarities of this sound become more manifest, and finally, when the myocardium becomes weakened by disease and its unequal effort, the sound loses muscular tone, becomes vibrating and uncertain, and at last may be attended with or replaced by a murmur.

The second heart-sound is accented early and remains so almost constantly, even to the very latest stages. This is too well known to require further discussion.

The sphygmogram shows a tendency to increase of what is called the tidal wave. The characteristic curve with sloping ascent and delayed decline is significant of late stages of the disease; it is a

development of a much later period than that which I believe we should recognize. Even from the first, however, the percussion wave of the sphygmogram is often less sharp and pronounced than in a normal curve, the reason for this being, in my judgment, the more prolonged expressive action of the left ventricle occasioned in arterio-sclerosis as it is in aortic stenosis by the *resistentia a fronte.*

The determination of blood-pressure has become more satisfactory in recent years, thanks to the labors of Von Basch, Riva-Rocci, and others. The best instrument is that devised by my assistant, Dr. Stanton. In determining blood-pressure we must remember that there is a maximum and a minimum, which respectively correspond with the height of systole and the time just preceding systole. Between these is a mean pressure. It is doubtful if we can ever determine the mean pressure, but a comparison of the highest and lowest pressures is obtainable, and their comparison gives a working basis for deductions as to the state of the circulation. We have, then, in this instrument a means of determining approximately the condition of blood-pressure, and these results may be utilized in the diagnosis of arterial disease."

"If the four symptoms I have named were found in arterio-sclerosis alone the problem of diagnosis would be greatly simplified, but this is not the case. An eminent authority (v. Basch) does indeed lay great stress on persistent increase of pressure as a symptom of arterio-sclerosis, and admits other causes as operative only for short intervals of time. I cannot accept this view as accurate. There are, I believe, numerous and varied conditions of the system, organic and nervous in origin, that elevate pressure nearly constantly, and in which arterio-sclerosis has no part except, perhaps, as a consequence. Any one of these conditions may occasion the four signs I have discussed."

Aside from this, however, we must further recognize that there is no fixed standard of pressure, and that an arbitrary figure, such as 150 mm. of mercury, is nothing more than an approximation.

In addition to these objective phenomena, a certain amount of evidence towards diagnosis is obtained from the examination of the urine and from ophthalmoscopic examination. I have called attention in the paper from which I have just quoted to the tendency to paroxysmal polyuria antedating albuminuria and to the marked fluctuations in the specific gravity of the urine. Later, and still antedating actual or at least well developed nephritis, occasional slight albuminuria may be detected and many cylindroids are found in the sediment. Finally the full establishment of interstitial nephritis is indicated by continuous slight albuminuria and the constant presence of hyaline casts.

The ophthalmoscope may reveal the positive evidences of vascular disease before the disease has become marked. This is more often the case in cerebral types, but is by no means confined to such cases. The arteries of the retina show distinct high lights, indicative of thickening, and the veins may be seen to be indented where they are crossed by the rigid arteries.

I am firmly convinced that the diagnosis of arterio-sclerosis can often be made with certainty at a stage antedating the changes which the crude method of palpation of the vessels allows us to recognize. I do not believe we are justified in regarding a presclerotic stage as established or recognizable. Even after the beginnings of the sclerosis, however, a proper regulation of the patient's life and other measures of treatment undoubtedly avail to retard the progress of the disease. I have seen cases of beginning sclerosis that have been so retarded by a fortunate change in the patient's condition of life, and have therefore much faith in the efficiency of hygienic measures deliberately prescribed. Among the measures, restriction in diet, avoidance of alcohol, moderation in work and exercise, avoidance of undue nervous strain, and often the relaxation of a complete change of surroundings, take foremost rank. The use of moderate doses of saline aperients, the judicious employment of mild mercurials, occasional courses of the nitrites, and alterative tonics, especially arsenic, seem to me of additional advantage. Active drugging is bad in theory and worse in practice. Digitalis is in these cases the most abused member of the pharmacopœial society.

INDICATIONS FOR ENTEROTOMY IN SOME FORMS OF INTESTINAL OBSTRUCTION, WITH A REPORT OF CASES.*

BY G. F. SHIMONEK, M. D.,

MILWAUKEE.

It is not possible in the time at my disposal to more than touch upon some of the salient points of this subject. Every surgeon has probably encountered cases of that protean disease, appendicitis, which have died from intestinal obstruction after the most conscientious and painstaking attention, shortly after the operation or after several weeks have elapsed.

I think it can be safely said that intestinal obstruction is one of

*Read at the 58th Annual Meeting of the State Medical Society of Wisconsin, Milwaukee, June 22, 1904.

the most fatal complications of appendicitis with peritoneal involvement that we are called upon to handle; therefore, any rational procedure that offers some prospect of diminishing the great mortality must be favorably looked upon.

There cannot be any doubt that a method which meets the indications, that is, the emptying of the overdistended intestinal canal and the probable restoration of the normal peristalsis, must be the natural procedure. Infection being the etiological factor, the obstruction is more or less of a temporary nature, that is, while the tendency is to a fatal termination, and in the severe cases it is invariably fatal, the barrier to recovery can be overcome by proper surgical intervention. It must not be understood that there are no cases of intestinal obstruction that cannot be successfully treated without laparotomy; such a misapprehension would be a most serious circumstance. One must properly appreciate the gravity of reopening the abdomen for any complication and more particularly so for obstruction. Enemata containing magnesium sulphate, glycerin, turpentine, quinin or alum should be carefully and rationally tried except in cases serious from their onset, in which delay means death.

The late Dr. Hardon was an enthusiastic advocate of an enema of a strong solution of alum in intestinal obstruction following laparotomy. I believe that this treatment was original with him, at any rate he reported several cases some years ago which were successfully treated with this remedy, and among them were some apparently very serious ones threatening to result fatally that yielded to moderately large enemas of alum. He did not explain the rationale of the action of the remedy, but the borborygmus following its use heralded the resumption of the peristalsis which was shortly thereafter succeeded by copious discharges of gas and fecal matter, and a complete subsidence of the threatening storm. I have used it in one such case with satisfactory result. It may, however, be stated that only those cases may be relieved that are due to an arrest of the normal peristalsis, probably due to an excessive and prolonged manipulation and exposure of the intestinal canal, immediately following laparotomy and unaccompanied by sepsis.

It cannot be expected that obstruction due to angulation or adhesions, etc., could be thereby overcome; using it under the latter conditions would simply throw discredit on the remedy that may be of some value in appropriate cases. This, I believe, should be the extent of remedial medication. Lavage of the stomach may be of great value not only by diminishing the exhausting vomiting and quieting somewhat the reverse peristalsis, but also by reducing the deleterious influence of auto-intoxication.

If the foregoing treatment has failed in producing normal evacuations, no more time must be lost before stepping to surgical intervention.

I wish most emphatically to denounce the administration of opium, catharties, or food by the stomach in any condition of obstruction. At any rate it is a very serious mistake to give opium *before* diagnosis is made. I have placed opium first, because one is greatly tempted, both by the severity of the pain and the patient's most urgent request, to at least alleviate the intense agony, and indeed it requires a great power of self-control not to yield to the patient's most piteous and repeated appeals.

Catharties might be followed by relief if the arrested peristalsis were of mild nature, but if the obstruction be due to angulation or other mechanical cause, the result would be disastrous. Food by the mouth bears the same relation to the impediment as does fuel to fire. The patient's strength may be somewhat maintained by nutrient enemas, heart-tonics, and stimulants hypodermically.

A brief review of the symptomatology may not be amiss. The severity of the symptoms depends upon the degree of occlusion; so long as there is some opening in the bowel the symptoms are modified just to that extent; the pathognomonic symptoms, therefore, depend upon the entire arrest of the fecal current, and are: increasing distention commensurate therewith, pain of a colicky character (sometimes so severe as to cause collapse); vomiting, consisting first of the stomach contents, finally of the intestinal contents, followed speedily by great exhaustion; pulse rapid and thready; temperature may be normal in the beginning but shortly begins to rise, this being due to two sources of infection: auto-infection from the decomposing fecal mass, and sepsis. The fact that there may be some discharge of gas or even solid feces should be logically weighed, for a complete obstruction might exist high up in the intestinal canal, so the evacuation must come from below the obstruction.

Ordinarily the diagnosis of complete obstruction may easily be arrived at. The only difficulty is to determine the exact *casus morbi;* this, of course, cannot be pointed out with any degree of certainty before the abdomen is opened, and even then it may not be possible on account of the immense distention of the intestines, unless complete eviscceration is done, but it might not be advisable to add so much shock, as this procedure is wont to occasion, to the already great depression.

To all intents and purposes, the history of the case must be depended upon for the solution of the problem. If it is borne in mind that the obstruction is generally of a character easily removable,

the procedure resolves itself into the evacuation of the retained excrement, the separation of adhesions, the straightening out of any kinks that may be found, etc. It might, apparently, be consistently argued that if the obstruction were simply overcome it would not be necessary to create an artificial opening. It cannot be denied that there is great danger from soiling the peritoneal cavity, in making an incision into the gut before the necessary manipulations are carried out, but by exercising extraordinary precautions, by very careful use of gauze barrier and by very painstaking attention to every detail in closing the intestinal incision, most of the dangers can be obviated. I think the Czerny-Lembert suture with fine silk is as safe a method as one can wish for. I wish to impress on the operator the preference to be given to silk in all enterorrhaphies and particularly in a condition where there are likely to be pathological alterations of tissue. It has been demonstrated that on the fifth day after enterorrhaphy, leakage is most likely to occur; so that if catgut be used, unless speedy agglutination has taken place, one's efforts will very probably be frustrated by the early solution of the animal suture. The suturing must be done with unlimited patience and extraordinary precaution because the intestinal walls are very generally thickened and softened by infection, and therefore, silk is the only suture material applicable here. One who is familiar with the difficulties in dealing with immensely distended intestines, will readily appreciate and admit that what little danger from peritoneal infection might exist, is more than counter-balanced by the facility of necessary manipulation after the bowels are thoroughly collapsed. Other things being equal, a careful operator is perfectly justified in performing enterotomy before any other manipulations are attempted.

Enterotomy is defined as an incision into the intestines for the purpose of permitting the escape of the accumulated contents, which are unable to find exit through the natural passages because of some temporary obstruction, and therefore, the chief object is a therapeutic one; by making the peritonial cavity accessible one is enabled to confirm or reject the previous diagnosis. So the operation may as well, also, be considered in a diagnostic sense. When the intestinal distention has been relieved and diagnosis has established the temporary character of the obstruction, the opening in the gut is closed; the toilet is attended to; the intestine is returned to the peritoneal cavity; the laparotomy opening is closed, the necessary dressings applied and the procedure is completed. Were it possible to determine the more or less permanent nature of the etiological factor, etc., or had the foregoing operation cleared up the necessity for a fecal fistula, enterostomy would then be the procedure demanded. If the obstruction

be caused by a malignant tumor or other inoperable condition, then the establishment of a permanent artificial anus would meet the indications. It is not my purpose to deal with the last two methods, but I deemed it advisable to briefly specify some of their individual features.

The imperativeness of keeping these three methods clearly in mind in order to appreciate the proper indications, is obvious. Each one has its particular and well-defined sphere and cannot be supplemented or supplanted by another.

The conditions causing a more or less permanent hindrance to normal evacuation, may be divided into three heads: Inflammatory, mechanical, and dynamic. Any one of these or a combination of two or more might be a sufficient cause of death even though the original lesion tended to recovery, or had recovered. This proposition needs no argument further than to say that complete obstruction of the intestinal canal almost invariably causes death by interfering with respiration, and by auto-infection irrespective of how successful the operative intervention might have been; the original lesion, a diseased appendix, for instance, may be very skillfully removed, but this, however, may not, and usually does not, influence in the slightest degree the expulsion of the intestinal contents. Therefore, while the appendicectomy has been perfectly successful from a surgical standpoint, the patient, however, succumbs to a complication which requires far more mature deliberation for its successful handling.

The inflammatory process infiltrates the intestinal muscle more or less extensively, thus interfering with normal peristalsis; as corroborative evidence may be mentioned the well recognized fact that in the early stages of appendicitis some inflammatory infiltration may occur in the ileo-cecal extremity, producing a temporary paralysis of a limited section of the bowel, which is accompanied by symptoms of obstruction more or less well marked. In peritoneal infection the inflammatory infiltrate being much more extensive, the entire canal may be paralyzed.

The mechanical obstruction is due to angulation, adhesions between loops of bowels, or compression by bands, etc. This form of obstruction is manifested possibly five or six weeks, or even longer, after an attack of appendicitis has been cured. This is simply the result of peritoneal infection.

The third variety is due to a paralysis of the musculo-nervous peristaltic apparatus by the effect of toxines absorbed by the central nervous system, this being usually the final stage of the disease and means that the system is so overpowered by the violence of the infection that death is almost inevitable and therefore may be disregarded for the purpose of our argument.

As above stated, obstruction may develop simultaneously with appendicitis which might have been intensified by the administration of an excessive quantity of opium.

The prognosis of such an unfortunate combination of things is almost surely bad. The forcible return of a tense and paralyzed canal into the already infected peritoneal cavity can mean one thing only, i. e., speedy collapse and death.

That enterotomy promptly done, first, if need be, or immediately following the removal of the appendix, may change a gloomy outlook into slightly interrupted recovery, the following case illustrates very clearly:

C. A., cooper by occupation, single, age 26, has had two or three attacks of appendicitis. He was seen in consultation. Diagnosis of appendicitis was concurred in, but the symptoms were so masked by the large quantity of opium (16 grains in 24 hours) which he had taken, that exact diagnosis could not be made.

His pulse was 80; temp. 101°; abdominal muscles very rigid; no pain, some tenderness; no distention; bowels had moved before the opium had been taken. The only thing that seemed at all indicative of danger was the muscular rigidity which seemed doubly significant on account of the opium; his pupils were markedly contracted, the mind was clear, but he was somewhat apathetic.

Diagnosis of peritonitis seemed evident, and in all probability of appendicular origin. The patient was transferred to a hospital. His pulse in a short time became accelerated—120; temp. 101°; abdomen distended and general condition very poor. Operation was done as quickly as possible. Appendix was found gangrenous and perforated, and was removed; large quantity of pus free in the peritoneal cavity; intestines were covered by large amount of exudate and immensely distended. Thorough irrigation with normal salt solution. The escaped intestines could not easily be replaced into the peritoneal cavity, therefore necessitating enterotomy. An immense amount of gas and fluid contents were evacuated; enterotomy incision was closed with mattress sutures of silk; gauze drainage.

After some ups and downs the patient made a fine recovery. I believe that the enterotomy saved his life, because the intestines were so thoroughly paralyzed from the combined effect of sepsis and opium, that normal peristalsis was impossible. No more pus formed and it seems that recovery might have taken place as well without drainage, but it is much safer to drain under such conditions. Obstruction may gradually develop after a variable space of time has elapsed, after apparently complete recovery from some severe form of appendicitis. This form of obstruction is due to mechanical causes. A band or an angulation may have been formed which gradually, but none the less absolutely stops the fecal current, and also interferes with the circulation of the blood. The only available treatment that is very positively indicated, or death is inevitable, is the re-opening of

the abdomen and relief of the constriction without enterotomy, if possible, with it if necessary. The amount of fulness of the bowels must determine the action.

Case 2. G., farm laborer, age about 25. Previous history negative. Entered the County Hospital suffering from gangrenous perforative appendicitis for which he was successfully operated upon. Recovery was prompt. About six weeks later he began to suffer from some colicky pain which rapidly increased in intensity; gradually the passage of gas and stool became less until it entirely ceased. Vomiting became stercoraceous. On examination tympanites and tenderness, chiefly over the right iliac fossa, were elicited; some elevation of temperature; pulse somewhat accelerated but of good volume; facies indicative of intense abdominal pain.

Diagnosis: Intestinal obstruction from adhesions. Laparotomy. Incision was made to the right of the right rectus, commencing above the umbilicus and extending to the lower end of the old scar. Peritoneal cavity contained some colorless and odorless serous fluid; intestines were intensely congested and distended, no exudate on peritoneum. It was deemed imperative to perform enterotomy and evacuate the contents. Large amount of very offensive fluid and gas was removed. Now it became easily possible to find an angulation of the ileum which was firmly adherent to the cecum; this was very easily corrected. The opening was closed by the Czerny-Lembert suture of silk. The intestinal canal was so thickened and softened that it was found extremely difficult to make an absolutely satisfactory closure, so two layers of Lembert were introduced. Abdominal incision was closed without drainage. The patient made an uneventful recovery.

It might be desirable to enter somewhat into a detailed exposition of the technique of enterotomy and how to select the proper loop for incision so as to obtain the maximum benefit therefrom and the occasional necessity of making multiple openings of exit, but the time limit will preclude anything more than a bare statement to the effect that one can hardly fall into an error of selecting a loop below the obstruction if one will but observe ordinary precautions. That part of the distended and usually congested bowel presenting itself at the laparotomy opening is practically the right one to open.

Discussion.

Dr. W. A. Batchelor, of Milwaukee—I want to say first that I believe this matter of enterotomy is one of considerable importance and one whose importance has not been sufficiently realized among the surgeons of Milwaukee. Perhaps I should say that this remark refers to the speaker personally, but I believe it refers to others as well, for in the time that I have done surgical work and seen it done by others, I cannot recall a single instance of seeing this operation done in Milwaukee hospitals. There certainly have been cases where it should have been done, and I believe it is done oftener abroad than in this country.

The operation dates back to the time of the French surgeon Nélaton, and in the early 90's Greig Smith, the author of the text-book on abdominal surgery, reported some hundred operations, that is some hundred enterotomies

done for obstruction. That certainly means that the operation is more popular in England than it is in Milwaukee. Furthermore, Dr. Shimonek's two cases have illustrated the importance of it. I believe, as he says, that in both of these cases the enterotomy was a very important element in the treatment.

Obstruction, partial or complete, arises as we all know, in many of our worst cases of appendicitis, those in which we find necrosis, rupture and general peritonitis—and in many of those cases I believe that the patient's chances will be very much improved, if—after our formal operation, be it removal of the appendix or drainage, or both (probably both in these cases)—an opening into the intestine is made and the contents evacuated; you relieve the distension and the paralysis which has already occurred consequent upon the peritonitis.

Then, too, obstruction may often occur as a post-operative sequel in various intra-abdominal operations, adhesions of intestines to raw surfaces, adhesions of intestine to inflamed omentum, or omentum that has been tied up—where perhaps the gangrenous portion of the omentum has been removed, leaving a raw surface—there is an opportunity for adhesions and obstruction; in some of these cases a second operation is indicated to remove the obstruction. The operation should be done with a view of seeking for the cause of the obstruction and removing it: but your operation will be more complete in many instances if having found the cause of the obstruction you do enterotomy.

Physically and physiologically the over-distended intestine is incapable of passing its contents onward, and, therefore, our operative treatment of intestinal obstruction is oftentimes incomplete unless this element is removed.

The chief indication for enterotomy is over-distension.

And another thought has occurred to me in connection with this subject, and that is in cases of obstruction, whether arising as a consequence of an operation, or *de novo*, the condition of the patient is sometimes such as to prohibit extensive manipulation of the abdominal contents, and in some of these cases an enterotomy would be the operation of election, or possibly an enterostomy, meaning by that an opening that is left patent, or is filled with a drainage tube, an operation which allows the intestine to drain for a day or two, which may tide the patient over the critical period and later enable his surgeon to go more thoroughly into the cause of the trouble.

One other point which I have seen referred to and of which all of us have seen instances, is the question of the anesthetic in patients suffering with obstruction or with a greatly distended abdomen, or distended stomach. These patients stand an anesthetic badly. Chloroform is probably the preferable anesthetic and the time of the anesthesia should be limited, and for the operation of enterotomy it may easily be limited to a very few moments—it takes very little time. We are told too, by those who have had large experience, that it has been repeatedly demonstrated that manipulation and incision of the intestines are not painful. The incision through the skin and through the abdominal muscles will be complained of, but an incision into the intestine can often be made with little or no anesthesia. This we are told by men whose experience is vastly greater than mine. I am glad to have been able to say a little in commendation of the subject and in commendation of Dr. Shimonek's presentation of it.

Dr. C. O. Thienhaus, of Milwaukee—I think we ought not to let this paper go by without any discussion. The points which the doctor has

brought out are excellent. It is absolutely necessary to wash out the stomach before the administration of the anesthetic in cases of ileus, no matter by what cause the obstruction is produced. Many cases have been cited in which this precaution has been overlooked and in consequence during the administration of the anesthetic or immediately following it, the patient has died from the result of fecal matter entering the trachea and the bronchial tubes.

Another suggestion: The doctor says, if I understand him correctly, he would do an enterotomy in all cases of ileus before he has found the seat of obstruction. This is true as long as he is absolutely sure that the ileus in the individual case is produced by obturation, and strangulation can be excluded, but where the differential diagnosis between these two classes of ileus cannot be made with certainty and in which we do not know where the seat of strangulation may be, I would always first try to detect the seat of strangulation, either by the rapid method of Mikulicz by taking out the intestines and putting them on a sterile towel, or by the other method of following gradually the distended part of the bowel up to that point where the flattened part of the bowel begins, that is, to the point of strangulation.

One point in regard to the technique of enterotomy: to avoid soiling of the peritoneum and of the wound, by the fecal matter, it is advisable to use a method similar to Witzel's method for gastrostomy, which consists in the following: take a part of the distended gut and press away the fecal matter from that part where you intend to make your incision. Then introduce a purse-string suture around the place of incision. Then after having made the incision, introduce rapidly a glass tube, around which you tie the purse-string suture, so that it is water proof. This avoids the escape of fecal matter into the wound entirely.

In general I believe that the method of enterotomy should be employed much more frequently than it is now employed.

Dr. Shimonek (closing)—I have very little to add to what I have already said. I cannot agree, however, with Dr. Thienhaus in respect to the advisability of evisceration when there is an obstruction and an enterotomy or enterostomy is required. Those operations have to be done quickly, as the doctor himself says, and if that is so, you complicate matters greatly by this more serious procedure; it adds a very serious item of shock. The evisceration of the whole intestinal canal itself is a matter of very serious import, and that in addition to the already weakened condition of the patient, as I have stated, will almost surely prove fatal.

Furthermore, when there is an obstruction due to paralysis of the intestine from inflammatory infiltration, all that is required is the emptying of the intestinal canal; it is not necessary to pull the canal out; the whole canal is obstructed as the result of paralysis. Under those conditions or under any other condition I think the operation of enterotomy is perfectly harmless and may save life.

The operation is not only of therapeutic importance, but of diagnostic value. After one has evacuated the intestines it gives one a chance to find out where the obstruction is, and if it can, it may be removed; if not, you may do an enterostomy or make a permanent artificial anus. Possibly under some circumstances, when the patient is in a good condition and there is an abundance of time, evisceration might be a help.

As I stated in the paper, let us find the obstruction without enterotomy if possible, or with it if necessary.

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EDITORIAL COMMENT.

THE SURGICAL TREATMENT OF "DYSPEPSIA."

The excellent address given by Dr. Roswell Park before the State Medical Society cannot help but appeal to every up-to-date medical man. He showed the trend of modern medicine to put a low value on terms such as indigestion and dyspepsia, which too often mean nothing and are used only to cover up ignorance or a lack of zeal on the part of the physician to study the case and arrive at a true diagnosis. It is true that it is often impossible, in these cases, to arrive at a certain diagnosis, but the very presence of the complex of symptoms generally classed under the term dyspepsia should be enough to impress upon the physician the necessity of a thorough examination of his patient.

Such an examination, according to Dr. Park, will at least be sufficient to show us that the real trouble is associated with either the stomach, the duodenum, the biliary passages, or the pancreas, and that the condition is best or only to be treated by operative methods.

Dr. Park's wide experience as a surgeon has brought him in contact with a very large number of cases of involvement of the upper abdomen and from his work he has arrived at some valuable conclusions. He shows us that the vague symptoms which formerly were classed under dyspepsia are, as a rule, due to such conditions as gastric ulcer, gastric cancer, cholelithiasis, pancreatitis, and the like, and can only be reached by surgical means. He also points out the intimate relations between the pancreas and the other organs of the upper abdomen and states that diseases of the pancreas are almost always secondary. In speaking of cancer of the stomach he emphasizes the fact that cancer, *per se,* produces no symptoms and it is only by the advance of the disease and the resulting disturbance in function that symptoms or signs arise. Cancer at first is a local disease and if attacked early enough can be completely and permanently removed. He reminds us that these dyspeptic cases go on from year to year with no benefit from medicinal treatment. He impresses upon us that in all cases where there are dyspeptic symptoms and these do not yield promptly to medical treatment, an exploratory operation should be performed and the cause of the trouble found and removed.

The general practitioner must learn that these dyspeptic conditions are essentially surgical and should be handed over to the surgeon before it is too late. The physician who rests content with his diagnosis of dyspepsia and treats his patient accordingly is not dealing justly with either his patient or himself.

ARTERIO-SCLEROSIS.

During the past thirty years remarkable progress has been made in the prevention and cure of acute infectious diseases. During the past twenty years remarkable progress has been made in the prevention and cure of diseases of infancy and young childhood.

As a consequence the average age of mankind has gradually advanced until now it is approximately 36 years.

Death is the common heritage of mankind. All that live must die. Inasmuch, therefore, as the mortality from diseases of infancy and young childhood, and from acute infectious fevers has so remarkably declined, there must arise a corresponding increase in mortality

from infirmities and diseases occurring in advanced life: malignant neoplasms, nervous and constitutional diseases, diseases of the kidneys, and diseases of the respiratory and circulatory organs.

Having accomplished so much in the direction of lessening mortality during the earlier years of life, clinicians and pathologists have latterly turned their attention more especially toward those diseases producing the greatest mortality in the late years of life.

During the late meeting of the American Medical Association a whole session of the medical section was devoted to a discussion of arterio-sclerosis. In vol. II, Fourteenth Series, International Clinics, forty-five pages are devoted to the same subject, including some considerations bearing on diseases of the heart.

In another place in this issue of the JOURNAL we publish a paper by Alfred Stengel on the Clinical Course and Diagnosis of Arterio-sclerosis.

This paper deals in a full and complete manner with the diverse clinical aspects of the disease and points out in a practical way the methods of early diagnosis. The importance of early diagnosis of arterio-sclerosis is equal to that in the case of pulmonary tuberculosis, for it is only in the early stages of the disease that effective measures can be adopted tending to arrest its progress.

Loss of arterial elasticity is believed by many to be the cause of senility. Degeneration of the media and thickening of the intima, causing an intermittent blood stream through the capillaries with lessened capillary pressure, results in obsolescence of capillary areas with consequent atrophy of the parts supplied with nutriment by these capillaries. When the arterial system is uniformly involved these atrophic processes go on evenly throughout the parenchymatous organs, until a time ultimately arrives when life can only be maintained under the most favorable conditions, and any unusual external influence is sufficient to cause a cessation of life.

When the means of preventing the development of arterio-sclerosis have been discovered, and when they can be applied successfully, then will men indeed reach a "green old age," and not the old age of Tithonus.

Youth is beautiful. Old age is hideous. Old age is not a thing of years, but a thing of sclerosed arteries. Let sclerosis of arteries be prevented, and though our years may multiply, we shall enjoy what Eos desired for Tithonus, but failed to specify when she begged of Zeus that her lover might live forever, that is, perennial youth.

The problem of the future is the prevention and treatment of chronic arterial sclerosis.

PHYSICIAN AND HEALTH DEPARTMENT.

A circular letter issued by Dr. F. M. Schulz, Commissioner of Health, and addressed to the physicians of the city of Milwaukee, again calls attention to the fact that many of us are negligent in reporting cases of contagious diseases occurring in our practice. It also points out the urgent necessity of more general co-operation of the practitioner and the Health Department, so that each may render more efficient service to the public in the attempt to control the spread of contagious diseases and to eradicate them from the municipality.

The Commissioner especially demands at this time that in addition to diphtheria, scarlet fever, measles, tuberculosis and smallpox, chicken-pox and typhoid fever shall be reported. He has found it impossible to entirely free the city from smallpox for the last two years, and states that it has several times occurred, that as a result of a failure to differentiate between smallpox and chicken-pox, many persons have been exposed to smallpox and numerous cases of this disease developed, which had been diagnosed as chicken-pox. In view of the fact that the cases of smallpox occurring at this time are mostly of very mild form, a diagnosis is often quite difficult. If, however, the cases of chicken-pox are reported they will be investigated by the assistant commissioners, who, because of greater experience with these diseases, will be the more able to differentiate and thus avert, by enforcing strict isolation, the spread of a grave disease which might be mistaken for the less dangerous one.

He urges that cases of typhoid fever shall be reported, so that, if possible, he may determine the source of the infection. It is well known that the city water is not the carrier of the bacillus, Milwaukee ranking third of American cities in its low mortality from typhoid fever. The germs may be ingested with well water, milk, oysters, or possibly with vegetables. If cases are reported, the milk and water supplies at least are examined, and it may thus be possible to check the spread of the disease by the same carrier of infection to others using this medium.

This appeal should meet with the approval of all physicians and should elicit their most earnest cooperation. It is only by being thus mutually helpful that either the practitioners or the Health Department officials can perform their duties to the best interests of the patient and the general public.

If this request is not heeded it is to be hoped that, pursuant of his power and under the statutory provisions of the State and the rules of

the State Board of Health, the Commissioner will institute such measures and so execute the law that physicians will be compelled to perform this duty. This will ensure to the public less danger of contagion and jeopardy of life and render such assistance to the profession on the part of the department, and to the department on the part of the physicians, as shall enable each the more effectually to perform his work in the interest of the patient and the public.

THE MILWAUKEE COUNTY HOSPITAL INVESTIGATION.

The Board of Supervisors' investigation into the conduct and management of the Milwaukee County Hospital is practically a thing of the past. It was conceived in a spasm of virtue, conducted for political capital, and resulted as a boom-a-rang to the Board of Supervisors, inflicting a ragged wound through which could be seen by the close observer the rottenness of our county government. It studiously hid the real abuses and ludicrously demolished the charges conceived by little minds.

It resulted in the uncovering of two facts—that the conduct of the affairs of the institution by the resident officials is as good as it can be under the present political management, and that a committee from the Board of Supervisors, recruited from the class that it is, and changing every second year, is totally unable to understand and appreciate the needs of a medical institution.

A very superficial investigation, without any admission or assistance from the local officials, which obviously it would not be proper to ask, shows immediately that the head of an institution, dependent for his position upon election by a political board every second year, must, to put it mildly, be tactful in his conduct of affairs. He must consequently not only not displease his masters, the Board of Supervisors, but he must be strenuous in his efforts to please. He must listen and pay at least some heed to recommendations as to the employment of favorites, he must consent to have his wards overcrowded by political dependents who are proper inmates of the poor house, but not of the hospital, and he might even be conceived to be compelled to go to lengths to which honest men cannot go, in order to retain his position. On the other hand, his greatest efforts for the good of the institution cannot be directed toward the immediate welfare of his patients, but must be expended in teaching his Hospital Committee the rules, for they seldom have the simplest common sense of these matters, for the management of a medical institution. Think

of the ridiculous spectacle presented by the head of our County Hospital fighting to establish the necessity of buying sterilizers for the new operating room, after he had fought every inch of the way for the operating room itself! And this is but one instance. Lest we be misunderstood, we wish immediately to commend Dr. Grosskopf for the work he has done for the institution and for the results obtained which he has accomplished by fighting almost unaided. We only wonder that he has not made more enemies than he has.

Public business is a private graft. We have heard this *ad nauseam* of late, but it seems to be a fundamental truth under present conditions. That our County Board is just now something of an improvement over many Boards of the past does not lessen opportunity for mismanagement in the future. Milwaukee County has a hospital building on its hands, constructed at a cost far beyond its value, that is already cracking and crumbling, exposing dishonesty in all its crevices, letting daylight in upon the inefficient methods of architectural supervision, and showing in glaring sunlight the stupidity or dishonest neglect of those members of the Board of Supervisors who had immediate charge of construction.

The physicians of Milwaukee County consider the County Hospital as peculiarly and particularly their ward, and they intend to see to it, if it is a possible thing, that its conduct and management in the future shall be an improvement over that of the past. They believe and have publicly expressed their belief, that the best results can be obtained only under government by a board of trustees, which is the form of government of our County Insane Hospital, known to compare favorably with any institution of its kind in the country. They will need help to accomplish what they want. There are 300 of them organized into one society, but they are going to ask their brothers in the state to come to their aid to bring about what legislative enactment may be necessary. They remember that their wishes in regard to the location of the Isolation Hospital are being ignored, but they also know who is ignoring them, and they fully realize the influence that they, as a united body and as individuals, can exert in the community when they see the necessity to exert that influence.

THE STUDENT ABORTIONIST.

The Milwaukee papers have within the past few weeks treated their readers to a few facts which, while they may have appealed to some simply because of their nastiness, have a very different significance to decent thinking men and women and to physicians who do

not sully their hands by making themselves parties to the crimes of others.

At the last meeting of the State Medical Society a paper on the moral aspect of abortions aroused much discussion. While there may be much honest difference of opinion as to the correctness of the essayist's high moral attitude, there can be no difference of opinion as to the criminality of the procedure as so frequently practiced. One gentleman even expressed the opinion that 50 per cent. of all physicians were guilty of this practice. If you protest that this estimate is extreme, reduce it by one-half, and fewer protests will doubtless be heard. It suffices but to admit the existence of this practice to an alarming degree, and if an honest man is bold enough to accuse one-half the physicians of guilt, it proves a conviction born of knowledge that the practice is rampant.

And now we are confronted with another, even more serious phase of this crime. Charges have been preferred against a senior medical student! We cannot pass upon this man's guilt—that must be left to the courts; but this is not the first time that charges of this character have come to our notice, and we have long since held a conviction that the practice is indulged in by some students, who, of course, branch out as professional abortionists after graduation.

Gods! The medical school or schools that nourish this sort of offspring have much to answer for. The student guilty of this detestable work is not the only guilty one. To a certain degree the medical schools are accessories to the crime. The retiring president of the State Medical Society—in his annual address—touched upon the one great evil of our present system of medical education: the lack of inquiry into the mental and moral qualifications of applicants for matriculation. With poor mental equipment moral obliquity goes hand in hand, and the failure to scrutinize mental qualifications implies a disregard for moral standards as well.

The higher the preliminary requirements a school possesses, the fewer men will it graduate who turn their hands to dirty and criminal work in later life, and *per contra,* the school with few, sham, or only catalogue requirements will attract those of low moral and mental plane, graduate them as physicians with the same sham under which they were accepted as students, and add their annual quota to the already large list of itinerant and resident quacks, and professional abortionists.

These are not theories, they are facts.

Our salvation from this evil lies not in the courts, its correction

cannot be made a matter for legal proceedings; our emancipation from this curse rests with the medical schools. Holmes has said that the training of the child begins 400 years before it is born. The training of the medical student begins with a faculty wise enough to accept the mentally and morally worthy applicants, and honest enough to reject the undeserving.

NEWS ITEMS.

University Pre-Medical Course—The Bi-monthly Bulletin of the University of Wisconsin for June, 1904, contains a complete announcement of the pre-medical course, the purpose of which is to indicate some of the advantages which the University of Wisconsin offers for the year 1904-05 to the student preparing to study medicine, and to the investigator interested in the medical sciences. Not only is opportunity given for the study of subjects of which some knowledge is demanded for entrance into leading medical schools, but, in addition, a thorough training and facilities for research are offered in human anatomy, histology, embryology, neurology and bacteriology.

Dr. L. H. Prince, superintendent of the Palmyra Springs Sanitarium, and Dr. Chas. H. Parkes, of Chicago, have acquired the controlling interest in the Sanitarium company, and propose to make extensive improvements in the present building, and also to erect modern buildings in the Sanitarium Park especially designed for the treatment of cases of mental disease.

Notification of Tuberculosis—A statute has been passed by the Legislature of the Province of Quebec, providing for notification in municipalities of all cases of consumption that have reached the stages of suppuration or expectoration.

Prevalence of the Plague.—During the half year period from November, 1903, to May, 1904, there have been reported almost 850,000 cases of plague, with 676,000 deaths. Of this number over 600,000 occurred in India.

Dr. Ernest L. Bullard, superintendent of the Wisconsin State Hospital for the Insane, Mendota, has resigned. Dr. Charles Gorst, of Baraboo, has been appointed to the vacancy.

Dr. F. W. Stewart, for several years physician in charge of the Sacred Heart Sanitarium in Milwaukee, has associated himself with Dr. Cox of Spooner in practice.

Suit Dismissed—The action brought against Dr. Ed. MacDonald, of Cuba City, for malpractice, has been dismissed in the Circuit Court for Grant County.

Removal—Dr. E. S. Hooper of Darlington has located in Redfern, Iowa.

THE STATE MEDICAL SOCIETY OF WISCONSIN.

ORGANIZED 1841.

Officers for 1904-1905.

C. W. OVIATT, Oshkosh, President.

J. A. L. BRADFIELD, La Crosse, 1st Vice-President.

GILBERT E. SEAMAN, Milwaukee, 2nd Vice-President.

A. B. ROSENBERRY, Arbor Vitae, 3rd Vice-President.

CHAS. S. SHELDON, Madison, Secretary.

S. S. HALL, Ripon, Treasurer.

A. T. HOLBROOK, Milwaukee, Assistant Secretary.

Councilors.

FOR ONE YEAR.

1st Dist., H. B. Sears, - - Beaver Dam
2nd Dist., J. G. Meachem, - - Racine

FOR TWO YEARS.

3rd Dist., F. T. Nye, - - - Beloit
4th Dist., E. S. Hooper, - - Darlington

FOR THREE YEARS.

5th Dist., J. F. Pritchard, - - Manitowoc
6th Dist., J. S. Walbridge, - - Berlin

FOR FOUR YEARS.

7th Dist., W. T. Sarles, - - - Sparta
8th Dist., T. J. Redelings. - - Marinette

FOR FIVE YEARS.

9th Dist., D. L. Sauerhering, - Wausau
10th Dist., E. L. Boothby, - - Hammond

FOR SIX YEARS.

11th Dist., J. M. Dodd, - - Ashland
12th Dist., A. T. Holbrook, - - Milwaukee

Next Annual Session, La Crosse, June, 1905.

The Wisconsin Medical Journal, Official Organ.

SOCIETY PROCEEDINGS.

The Proceedings of the House of Delegates and the Minutes of the General Session of the State Medical Society will be published in full in the September issue of the JOURNAL.—(Ed.)

CLARK COUNTY MEDICAL SOCIETY.

The regular meeting of the Clark County Medical Society was held at Withee July 12. Five members were present.

Dr. Karl Doege read a paper on "*Clinical Diagnosis of Malignant and Benign Tumors of the Female Breast*"; this was discussed by all present.

One new member was admitted to the Society.

After the business meeting the members were given a very pleasant drive, followed by dinner at the hotel and a musical entertainment.

The next meeting will be held at Colby.

VIOLA M. FRENCH, M. D., Secretary.

DODGE COUNTY MEDICAL SOCIETY.

The regular meeting of the Dodge County Medical Society was held at Juneau, August 1st.

Papers were presented by Dr. W. E. Hallock on *Pneumonia*, by Dr. H. M. Holtz on *Hysteria*, and by Dr. A. E. Bachhmber on *Flat-foot*.

H. B. SEARS, M. D., *Secretary*.

DIRECTORY OF COUNTY SOCIETIES.

COUNTY.	PRESIDENT.	SECRETARY.
Ashland	W. T. Rinehart, Ashland.	N. N. Glim, Ashland.
Barron-Gates-Polk	O. M. Sattre, Rice Lake..	I. G, Babcock,Cumberla'd
Bayfield	H. G. Lampson, Washb'n	T. B. Hicks, Washburn
Brown	D. H. Gregory, De Pere.	A. V. de Neven, Gr'n B'y
Buffalo-Pepin	M. B. Axtell, Pepin.....	P. B. Amunson, Mondovi.
Calumet	J. E. Luce, Chilton.....	G.P.McKenney, Stkbridge
Chippewa	C. A. Hayes, Chipp.Falls.	J.N.Cunningham, Stanley.
Clark	D. R. Freeman, Colby...	V. M. French, Neillsville.
Columbia	J. J. Howard, Columbus.	F. D. Bentley, Portage.
Crawford	G. H. Perrin, Wauzeka..	A. J. McDowell, Sol. Gr'v
Dane	C. A. Harper, Madison..	R. H. Jackson, Madison.
Dodge	E. M. McDonald, B. Dam.	H. B. Sears, Beaver Dam.
Door	H.R.Simon. Sturgeon Bay	G.R.Egeland, Sturg'n By.
Douglas	George Saunders.....	W. W. Pretts, Superior.
Dunn	E. H. Grannis, Menomo'e.	G. A. Barker, Menomonie
Eau Claire	J.V.R.Lyman,Eau Claire.	H. A. Fulton, Eau Claire.
Fond du Lac	J.H.McNeil, Fond du Lac.	Flora A.Reed.FondduLac.
Forest-Florence	C. A. Decher, Crandon...	S. M. B. Smith, Crandon.
Grant	J. Oettiker, Platteville..	P. L. Scanlan, Lancaster.
Green	Sam'l Moyer, Monroe...	Wm. B. Monroe, Monroe.
Green Lake	C. E. Thayer, Markesan.	B. E. Scott, Berlin.
Iowa	W. J. Pearce, Dodgeville.	S. P. Deahofe,Mineral Pt.
Iron	J.H.Urquhart, Iron Belt.	T. J. Hambley, Hurley.
Jefferson	Wm. W. Reed, Jefferson.	Carl Feld, Watertown.
Juneau	J. B. Edwards, Mauston.	A. T. Gregory, Elroy.
Kenosha	G. Windesheim, Kenosha	F. E. Andre, Kenosha.
Kewaunee	R. H. Rice, Kewaunee..	W. Wochos, Kewaunee.
La Crosse	F. C. Suitor, La Crosse..	C.H.Marquardt,La Crosse
Lafayette	C. C. Gratiot, Shullsburg.	C.Lehnkering, Darlington
Langlade	I. D. Steffen, Antigo....	Frank I. Drake, Antigo.
Lincoln	W. H. Monroe, Merrill..	C. C. Walsh, Merrill.
Manitowoc	Louis Falge, Reedsville..	J. E. Meany, Manitowoc.
Marathon	D. La Count, Wausau...	H. L. Rosenberry,Wausau
Marinette	T.J.Redelings, Marinette.	A. T. Nadeau, Marinette.
Marquette	W.J.Thompson, Briggsv'l	W. O. Dyer, Westfield.
Milwaukee	G.E.Seaman, Milwaukee.	A. W. Gray, Milwaukee.
Monroe	G. R. Vincent, Tomah...	C. M. Beebe, Sparta.
Oconto	C. W. Stoelting, Oconto.	H.F.Ohswaldt,OcontoFalls
Oneida	C.D.Packard, Rhinel'der.	S. R. Stone, Rhinelander.
Outagamie	C. D. Boyd, Kaukauna..	M. J. Sandborn, Appleton
Ozaukee	E. E. Couch, Pt. Wash..	Thos.A.Berwick,Saukville
Pierce	Henry C. Cotton, Presc'tt	D.Woodworth, Ellsworth.
Portage	Galen Rood, Stevens Pt..	C.v.Neupert,Jr.,Stev's Pt.
Price	W. P. Sperry, Phillips...	A. D. Gibson, Park Falls.
Racine	W. S. Haven, Racine....	C. F. Browne, Racine.
Richland	R.H.DeLap, Richland Cr.	M. W. Haskell, Richl'd C.
Rock	Ernest C. Helm, Beloit.	G. W. Fifield, Janesville.
Sauk	Chas. Gorst, Baraboo...	Roger Cahoon, Baraboo.
Shawano	W.H.Cantwell, Shawano.	H. W. Partlow, Shawano.
Sheboygan	O. J. Gutsch, Sheboygan.	H. C. Reich, Sheboygan.
St. Croix	E.L.Boothby, Hammond..	L. P. Mayer, Hudson.
Taylor	E. LeSage, Medford.....	J. H. Francis, Medford.
Trempealeau-Jackson	G. N. Hidershide,Arcadia	Henry A. Jegi, Galesville
Vernon	J. K. Schreiner, Westby.	C.H.Trowbridge, Viroqua
Vilas	A.B.Rosenberry, Arbor V.	W. E. Wray, Minocqua.
Walworth	B. J. Bell, Genoa Junct'n	W. A. Loops, Darien.
Washb'n-Sawy'r-Burn'tt.	J.B.Trowbridge, Hayw'd.	E. R. Hering, Shell Lake.
Washington	H. Blank, Jackson.....	G. A. Heidner,West Bend
Waukesha	B. M. Caples, Waukesha.	A. J. Hodgson,Waukesha.
Waupaca	L. H. Pelton, Waupaca..	J. F. Corbett,Weyauwega.
Winnebago	G. M. Steele, Oshkosh...	S. B. Ackley, Oshkosh.
Wood	O. T. Hougen, G. Rapids.	F. Pomainville, G.Rapids

JUNEAU-ADAMS COUNTY MEDICAL SOCIETY.

The semi-annual meeting of the Juneau-Adams County Medical Society was held at Elroy, July 12. Two new members were admitted, increasing the membership to 15.

Dr. C. S. Smith read a paper on "*Appendicitis,*" with a report of cases operated on. The paper was generally discussed by the members present.

Dr. A. T. Gregory read a paper on "*Factors That Influence Pneumonia.*" All participated in the discussion which followed.

The members of the Society were entertained at dinner by Dr. C. S. Smith, and during the noon hour inspected the Elroy Hospital.

The next meeting of the Society will be held at Mauston, Dec. 6, 1904.

A. T. Gregory, M. D., Secretary.

LAFAYETTE COUNTY MEDICAL SOCIETY.

At the regular quarterly meeting of the Lafayette County Medical Society, which was held at Shullsburg on July 12, twenty-one were present, including five visiting physicians and four dentists, and the meeting was a very enjoyable and successful one.

At the morning session the subject of "*Abortion*" was considered by Dr. F. M. Bair, and was discussed by Drs. M. C. Barber and T. J. Buckley.

Dr. E. A. Dunn read a paper on "*Infantile Diarrhea,*" which was discussed by Drs. S. Birbeck and A. D. Brown.

At the banquet at 1 p. m. Dr. W. W. Peck acted as toastmaster.

The afternoon session was opened with a poem by Dr. R. J. Fairchilds.

A paper on "*Delayed and Non-union of Bones*" was read by Dr. A. Hayden and discussed by Drs. W. W. Peck and O. W. Hogue.

"*Albuminuria During Pregnancy*" was the title of a paper read by Dr. O. L. Hansen; this was discussed by Drs. E. S. Hooper and H. E. Scott.

The session closed with a general discussion of the subject, "*Why Not Do Our Surgery at Home?*" in which all took part.

The regular annual meeting will be held at Darlington, Jan. 12, 1905, but a joint meeting with the Green County Medical Society is to be held at Monroe some time in September.

C. F. Lehnkering, M. D., Secretary.

MEDICAL SOCIETY OF MILWAUKEE COUNTY.

Meeting of June 17, 1904.

The regular monthly meeting was held in the Public Museum Building, June 17, President G. E. Seaman in the chair. Thirty-two members were present. Twenty-two new members were elected.

A delegate was elected in place of A. J. Burgess, who was to be out of the city. The delegates to the House of Delegates of the State Society are as follows: W. H. Washburn, U. O. B. Wingate, F. Shimonek, H. M. Brown, H. B. Hitz; alternates, L. F. Jermain, C. H. Stoddard, H. E. Dearholt, W. T. Nichols, D. W. Harrington.

On motion of Dr. Thienhaus, a committee consisting of Drs. Thienhaus, Stoddard and Studley was appointed to look into the feasibility of establishing a medical library.

H. M. Brown introduced a resolution commending the Postmaster General and the Post Office Department for their efforts to prevent the mails from being used for disseminating improper medical advertisements.

Dr. U. O. B. Wingate reported that the Tuberculosis Committee was awaiting the return of the similar committee appointed by the Governor from its tour of inspection in the East. Some plan of coöperation between the two committees was on foot.

Cases were reported by Drs. Hopkinson, L. F. Jermain, Thienhaus, Reineking, and Nichols.

Meeting of July 15, 1904.

The regular monthly meeting was held in the Public Museum Building, July 15, President G. E. Seaman in the chair. Twenty-seven members were present and seven were elected to membership.

The County Hospital Investigating Committee made the following report:

To the Medical Society of Milwaukee County: Your committee appointed to investigate the charges brought against the management of the county hospital and the visiting staff beg leave to report as follows:

Some members of the committee attended all sessions of the investigation conducted by the special committee of the Board of Supervisors and we have reviewed the transcribed testimony obtained at that investigation. The committee also visited the county hospital, and as our visit was unannounced we feel that we had an opportunity to thoroughly investigate existing conditions, to observe the system and methods of management, to inspect the food, its preparation and serving, and care and treatment of patients.

Food—We find that the food is ample in quantity and of a reasonably good quality, but lacks in variety on account of the Board of Supervisors as formulated in the printed diet list. The preparation of the food seemed, from our observation, to be reasonably good. The serving of food to the patients is, on the whole, satisfactory, although at times, through carelessness or slowness of individuals, there may be some chilling of the food while it is being taken to the patients.

Visiting Staff—The charges against the visiting staff were not sustained, excepting minor particulars. We find in one instance that it has happened that a patient was taken to clinic under protest. This was probably due to her inability to understand the purpose of a clinic. In another instance, in a gynecological clinic, a patient was examined by ten or twelve students at one time, a number which your committee considers altogether too great. On the whole, the visiting staff is deserving of credit for the careful and conscientious discharge of its duty.

Management—In regard to the management we have found the superintendent handicapped by rules laid down by the Board of Supervisors, a board of men without adequate knowledge of the management, needs and regulations of an institution for the care of the sick. We find that more definite regulations as regards the duties of the matron and resident staff should be laid down, so that the superintendent may better systematize the work in the different departments of the hospital. We are of the opinion that the present superintendent is giving as good service as the present political situation will allow.

Buildings—The condition of the buildings at the county hospital is not all that could be desired. The old part of the main building has naturally deteriorated during its many years of use. It should have been demolished, instead of being retained to form part of the new hospital. The main part of the new building was well planned, but it shows evidence of shoddy construction and poor supervision everywhere.

The ventilation system has never been in working order, although constructed several years ago, and supposedly finished, at great expense to the county.

The grounds are not kept in orderly condition, and show neglect.

The morgue is a disgrace to Milwaukee county, and should be immediately replaced by a suitable structure with a modest pathological laboratory in connection.

Discharge of Patients—We find that the care and treatment of the really sick is hampered by the presence of 15 to 30 per cent of the total number in the hospital at all times, kept there as boarders after they should be discharged, because of pressure brought to bear by some member of the Board of Supervisors or other political influence. If the patients were discharged in each case when they should be discharged we believe the present help might be sufficient to give proper care to the sick both day and night.

Recommendations—We recommend to the county society that immediate steps be taken looking to a change of the law relative to the government of the county hospital, whereby it will be placed under the management of a board of trustees similar to the board that manages the Milwaukee Hospital for the Insane. The Board of Supervisors, composed of men elected for two years, who have no particular qualification excepting in a political way, can not be expected to manage a hospital for the best interest of the sick poor, or for the best interests of the taxpayers.

All of which is respectfully submitted.

T. L. Harrington,
Lewis C. Tisdale,
Johan De Besch,
William A. Sickles,
A. W. Gray.

The report was adopted and referred to the Committee on Public Health and Legislation, with instructions to work in favor of placing the County Hospital under government by a board of trustees.

Dr. C. H. Stoddard reported that the Library Committee, appointed at the last meeting, considered the establishment of a library at the present time to be impracticable, but recommended that the Milwaukee Medical Society be requested to allow the use of its library, under conditions mutually agreeable to both societies, to the County Society.

A general discussion upon possible plans for handling the society during the coming year followed. It seems to be strongly appreciated that interest must be maintained and that the coming year will be a crucial one in the existence of county societies.

Dr. A. N. Baer presented a case of *tuberculosis of the knee-joint* cured by the Bier method.

Dr. Wilhelm Becker reported a case, and exhibited the specimen, of *ulcer of the stomach* in a man over fifty years of age, of ten years' duration, in which death occurred from rupture of a sclerosed artery in the base of the ulcer. He also reported a case, with photograph of specimen, of *scirrhus carcinoma of the stomach* in a man fifty-five years old. The man took food until three days before death, had normal movements, and the diagnosis was not made until ten days before death. The stomach was as large as a medium size potato; it had a capacity of only 10 cc. The pancreas, liver and spleen were involved in the connective tissue growth, but no metastases were found.

The society adjourned until the second Friday in September.

A. W. Gray, M. D., *Secretary.*

WASHINGTON COUNTY MEDICAL SOCIETY.

A meeting of the Washington County Medical Society was held in the school house in Jackson, Dr. Blank, the President, in the chair. Other members present were: Drs. Edwin H. Ehlert, Geo. H. Rheingans, C. Bossard, N. E. Hausmann, H. F. Weber, W. J. Wehle and G. A. Heidner.

The programme consisted of several very interesting clinical cases presented by Dr. Blank, a paper on *Appendicitis* by Dr. Hausmann, and one by Dr. Bossard on *Infantile Convulsions.* Both papers were very fully discussed.

The next meeting will be held in Kewaskum on the last Wednesday in September. G. A. HEIDNER, M. D., *Secretary.*

BRAINARD MEDICAL SOCIETY.

The annual meeting was held at Milwaukee Hospital on July 13th. The following officers were elected for the ensuing year: President, Dr. G. A. White, Milwaukee: vice-president, Dr. G. A. Kaumheimer, Milwaukee; secretary and treasurer, Dr. N. Edward Hausmann, Kewaskum.

The retiring president, Dr. Hugo Philler, of Waukesha, read an interesting and valuable paper on Neurasthenia. Dr. D. W. Harrington, of Milwaukee, read a very interesting paper on "Infant feeding," which was discussed by Drs. Boorse, Beffel, Hipke, T. C. Malone, Comfort, Heidner, Reineking and Lewis.

Dr. B. McShane, of Milwaukee, read a paper on "Prevention of Perineal Lacerations," and Dr. M. A. T. Hoffmann, of Campbellsport, read a paper entitled "Immediate Repair of Perineal Lacerations." The next meeting of the society will be held at the Milwaukee Hospital, Oct. 12th, 1904.

N. EDWARD HAUSMANN, M. D., *Secretary.*

FOX RIVER VALLEY MEDICAL SOCIETY.

The regular quarterly meeting of the Fox River Valley Medical Society was held at the Lakeside Theater, Marinette, July 19. The president, Dr. J. R. Minahan, called the meeting to order, and in the absence of the secretary, Dr. P. J. Noer was chosen secretary *pro tem.*

Dr. J. F. Ford, of Omro, presented a very comprehensive paper on "*Meningitis,*" dealing chiefly with the medical aspect of the subject. He held that all cases arising from traumatism are surgical and should be referred to the surgeon for treatment. When the various surgical forms of meningitis are eliminated there still remains an uncomfortably large number of cases for the general practitioner. The gravity of the disease should be appreciated and perseverence in treatment is essential. A trained nurse is a necessity; he who undertakes the treatment of meningitis without one is negligent of the best interests of his patient. Visitors must be absolutely excluded from the sick room. Hot and cold water bottles should be at hand. The room should be darkened and absolute quiet must be enforced. Headache will call for relief, and this is best accomplished by the application of cold to the head, the scalp having been previously shaved. The use of blisters and massive doses of iodides are deprecated. Small doses of bromides are useful. Constipation should be relieved early, by croton oil if necessary. The emptying of the bladder must not be overlooked.

Lumbar puncture is advised for diagnostic purposes or for drainage. It is useless as a therapeutic agency in tubercular and suppurative forms. Tapping and injecting antiseptic solutions to the surface of the meninges has given good results in selected cases. Keen was cited as believing in tapping and drainage.

Letters from prominent surgeons on the treatment of non-suppurative forms of meningitis were presented.

Dr. W. G. Nicholson, of Green Bay, discussed the paper from the surgical standpoint. He pointed out the various avenues by which infection reaches the meninges from the surface and from the various cavities of the head, and emphasized the importance of the prophylactic treatment in connection with carbuncles of the face and neck and suppurative diseases of the ear, eye, nose and accessory sinuses.

In the general discussion which followed Drs. Elwood, Fairfield, Adams, Barnett and Thienhaus took part.

Dr. N. P. Mills, of Appleton, presented a very excellent paper on "*Osteomyelitis.*" He outlined clearly the etiology, pathology, diagnosis and treatment of the disease. He was impressed with the gravity of the disease, as he had had five acute cases in five years, all of which proved fatal, notwithstanding prompt surgical treatment. (This paper will appear in a subsequent issue of the JOURNAL.)

Dr. Redelings, of Marinette, in discussing the paper, stated that his experience with acute osteomyelitis had been similar to that of the writer, except as to number of cases. He thought five acute cases in five years was an unusually large number.

Dr. Noer, of Menominee, thought the preceding gentlemen were taking too gloomy a view of acute osteomyelitis because of this unusual series of seven cases, all of which were fatal. According to Czerny the majority of acute cases are of moderate severity and are amenable to surgical treatment. A recent case was cited in which the lack of early radical surgical treatment had jeopardized life and resulted in complete destruction of the tibia from the tuberosity to the ankle joint.

The discussion was continued by Drs. Thienhaus, R. E. Minahan, and Fairfield.

Dr. P. J. Gaunt of Oconto was elected to membership.

CURRENT LITERATURE.

The Determination of the Motor Function of the Stomach—H. ELSNER (*Berlin Klin. Wochenschr.*, No. 25, 1904) describes a modification of the Mathieu-Redmond procedure for the determination of the motor function of the stomach, which he believes is valuable in cases in which the disturbance is slight and the passage of food into the duodenum simply delayed. In addition, the method is considered valuable in differentiating between hypersecretion and motor insufficiency. The procedure consists in the determination, not only of the total quantity of contents present in the stomach an hour after a test meal, but also of the solid remnants of food. A test breakfast consisting of 60 grs. of bread and 400 grm. of water is given and an hour afterward the contents are aspirated and the total acidity determined.

200 cc. of water is then introduced and again aspirated. Washing is then resorted to until the water returns clear. All the washings of the stomach are then placed in large graduates and allowed to remain for 24 hours, at the end of which time the total quantity of solids can be read. In examining a number of apparently normal cases, it was found that the quantity of solids remaining ranged from 30 to 100 ccm. and that any quantity above 100 ccm. indicated motor insufficiency.

In cases of hypersecretion, however, the author doubts the reliability of his findings, inasmuch as amylolysis is impeded, and the total quantity of solids thereby influenced even in the absence of motor weakness. (L. F. Jermain.)

Analysis of Gastric Contents—C. S. Fischer (*Am. Jour. Med. Sc.*, July, 1904) contributes a timely article on "The Clinical Value of the Average Analysis of Gastric Contents." After a long series of careful observations he concludes that the ordinary Ewald test meal consisting of bread and tea gives a very untrustworthy idea of the true condition of the gastric juice as regards its hydrochloric acid content. He says that the test meal as ordinarily given does not call forth the normal response of the gastric glands. It fails in the following prime requisites: (1) It is not palatable and does not excite the appetite; (2) It is not a physical chemical stimulant to the secretory centers, and (3) It puts the patient under conditions that are unnatural to his mode of life. The author thinks that these points explain why there is so much variation in the results obtained from this test meal. He suggests the use of a quarter of a pound of chopped beef, broiled and suitably seasoned, in addition to the bread and tea of the Ewald meal, to be examined three hours after its ingestion. With this meal he has obtained a series of much more uniform and satisfactory results. (W. H. Washburn.)

Lumbar Abscess—In view of the declining confidence in the value of iodoform-glycerine emulsion in tubercular abscess, it is interesting to note the clinical report in *The Jour. of the Amer. Med. Assoc.*, July 2, 1904, by Dr. Ludlow. The abscesses were treated by aspiration, and injection of iodoform-glycerine emulsion in the strength of 15 grains to the ounce, usually three ounces being injected at intervals of 2 or 3 weeks. The cases occurred in the service of Dr. D. P. Allen in the Lakeside Hospital, Cleveland. Although no tubercle bacilli were demonstrated, from the history and the cheesy character of the pus it is reasonable to consider them tubercular.

In the summary he says: (1) Four cases gave a family history of tuberculosis. (2) Two patients gave a history of injury to the back. (3) The urine from four cases gave a reaction of iodine the next day after aspiration. (4) Slight mental depression was noticed in two cases. (5) As a general rule, there was an elevation of temperature from 2 to 4 degrees after injection. (6) The cultures were sterile in every case except one, in which the bacillus proteus vulgaris was obtained. (7) In all six cases there has been no indication of return of the abscess, after a period of 5 years in one case, three years in another and two years in a third, while in the remaining three one year or less has elapsed since the last aspiration.

There was a marked improvement in the general health of every patient.

(F. Shimonek.)

Disinfecticn of Clothing—*The Sanitary Inspector*, Maine, gives the following method for disinfecting a suit of clothes: "Put the clothes into a common wash-boiler, in one end of which a soft towel has been placed. Pour upon the towel a quantity of formalin, allowing at least an ounce for each cubic foot of space, and put a cover on immediately, and keep it closed five or six hours at least. Before taking out the suit a little ammonia water poured upon the towel will help to neutralize the formaldehyde and remove the pungent odor from the clothing." (We think a more satisfactory method of disinfecting clothing, however, is by hanging the clothing, with the pockets turned out, in a closet: each garment should be suspended separately, and on cords or wires attached to each side of the closet; then generate formaldehyde by one of the various generators, or suspend a sheet by its edges and sprinkle with formaldehyde as recommended by the Chicago method; keep the closet closed as nearly air tight as possible for six to eight hours; several suits, or all the clothing that the closet will contain, can be disinfected at one time. The odor from the formaldehyde can be effectually removed from the clothing and closet by spraying with ammonia water. U. O. B. Wingate.)

Prognosis and Treatment of Urethral Stricture—E. L. Keyes, Jr., (*Med. News*, July 9, 1904) believes in general that proper treatment of stricture implies a good prognosis. He also believes that proper treatment of the causes of stricture will prevent its occurrence.

The causes of stricture are trauma and gonorrhea. The acute stage of gonorrhea is the time when the damage is done which causes the stricture. Therefore, to prevent stricture the acute stage must be modified. Traumatic stricture is caused by the use of instruments or injury to the perineum. "Happily, the day of urethral brutality is almost past." The use of strong silver nitrate solution and tearing the canal with instruments of all sizes and shapes is no longer the ornament of modern surgery. The constant use of the catheter in prostatic hypertrophy will, in some cases, cause stricture in spite of every precaution. If the passage of a sound about twice a week causes a gradual widening of the canal the prognosis is excellent.

A resilient stricture which contracts to its former calibre after each passage of the sound demands internal urethrotomy. Gonorrheal strictures of the bulbous canal are always dilatable, unless damaged by rough instrumentation. Traumatic strictures are usually so dense and resilient that removal of scar tissue is demanded. Irritable stricture, where every passage of the sound causes inflammatory reaction, must be submitted to a course of palliative treatment unless the conditions are such as to threaten life, when external urethrotomy must be promptly done. Impassable stricture demands perineal section. Many strictures apparently impassable may be passed by patience and proper preliminary treatment.

The prognosis of stricture depends largely upon its location. If in front of the peno-scrotal angle it will probably not cause retention. Such strictures are difficult to cure without cutting, but if once dilated, and kept so for a few months, a permanent cure may be expected. The deeper strictures promise a much graver history, as retention with all its complications will occur unless dilatation is thorough and prolonged. These strictures may require the passage of a sound two or three times a year throughout life. (F. E. Walbridge.)

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ORIGINAL ARTICLES.

OSTEOMYELITIS.*

BY N. P. MILLS, M. D.,
APPLETON.

There can be but two essential reasons for presenting here a subject of this kind. First: That the author may exhibit conclusions or discoveries of his own. Second: That the salient points of the subject may be brought before you to elicit a discussion.

So far as discoveries are concerned, I plead "not guilty." My conclusions on many points are yet to be concluded. Therefore, the salvation of this paper is wholly dependent upon the discussion it provokes.

The subject of osteomyelitis is too large to deal with exhaustively in a paper of this kind, yet it seems to me that I can better express my thoughts by taking it up in orderly sequence and disregard such parts as seem of least interest.

I do not propose to deal with the subject of chronic osteomyelitis except as to its surgery.

Etiology of Acute Suppurative Osteomyelitis. Reduced to its last analysis, the essential causes are four:

First: An infection atrium. Second: A pathogenic micro-organism. Third: Anatomical conditions in the epiphyses of growing bones. Fourth: A reduced resistance of the vascular tissues or blood stream.

The infection atria may be at any point on the surface of the body and probably anywhere in the alimentary canal. It would seem

*Read before the Fox River Valley Medical Society, Marinette, July 19, 1904.

that the most usual atrium is a furuncle. In my own experience this is more often upon the neck. Frequently a period of months intervenes between the disappearance of the furuncle and the beginning of the bone involvement. A burn, contusion, puncture, abrasion, abscess or incised wound may at times be the atrium of infection. Indigestion with gastritis and enteritis is said to be at times the locus of infection, but this is far from proven.

Of the organisms responsible there might be mentioned nearly every pus-producing microbe known to pathology. Of the more common we would name, in the order of their frequency, the staphylococcus albus and aureus, the streptococcus, pneumococcus, the colon and typhoid bacilli. By far the greater number are due to staphylococci and streptococci.

In the growing bone from infancy to maturity (practically the only period in which osteomyelitis occurs) a peculiar condition prevails at the epiphysis. The blood vessels are imperfectly formed, being composed of a single endothelial layer and terminating in blind ends, and are, in reality, end vessels. The capillaries are four times the normal size, hence they render the blood current much slower. A slow blood current, with blind ends and imperfectly formed vessel walls, renders the lodgment of circulating bacteria more probable here than at almost any other point. An injury to the vessels, as in fracture or contusion of the bone, also furnishes a determining influence to circulating bacteria.

Infection atria are innumerable, pyogenic bacteria are almost universal, anatomical conditions are the same in all growing bones; hence these causes must be considered merely as subsidiary to the main determining cause, *viz.*, reduction of the resistance normal to the vascular tissues.

The normal blood is antagonistic and fatal to all pathogenic germs. What is the cause of this chemical change in the vascular tissue? Probably the true cause is yet to be discovered. Speculative causes are exposure to cold—causing inequalities in the circulation, that is, peripheral anemia and splanchnic engorgement—toxemia due to the exhausting fevers—as typhoid, pneumonia, diphtheria, etc.—exhaustion due to over-exertion, causing an excess of metabolic products in the blood stream.

An interesting theory propounded by Sajous, which may prove to have merit, is, that the bactericidal substance in the blood is none other than the secretion from the adrenal glands, and that a lack of the normal blood resistance is due wholly to a hypoactivity of the adrenals. Any prophylaxis that will prove of avail must, I believe,

come through a better understanding of the chemical changes which the blood must undergo ere bacteria can with impunity traverse its channels.

Pathology. Beginning with the infection atrium, a vascular metastasis occurs with lodgment in the epiphysis of the bone. Only too often during the process the whole vascular system becomes surcharged with the bacteria, resulting in a septicemia, plus the minor affection osteomyelitis. Then, even after the osteomyelitis is established, the patient is again subjected to the possibilities of a septicemia from the thrombo-phlebitis and softening at the point of bone infection. The reduced resistance which the blood undergoes to make osteomyelitis possible greatly increases the probabilities of a complicating septicemia. The process in the bone begins with a lodgment of a colony of germs in the wall of the imperfectly formed vessel, destruction of the vessel wall, thrombosis, an inflammatory wall about the infected area, with a softening center. Soon the whole of the medullary portion of the bone is involved with perforation of the shell, followed by periostitis and cellulitis.

An edema, generally noticeable, of the extremity below the point of infection occurs, due to the venous obstruction in the bone. Hydrops of the joint adjoining is a frequent association, due to the same cause as the edema. Later, by direct extension, a pyoarthrosis may occur. Rather rarely a number of osteomyelitic processes may arise independent of each other, but where multiple they are usually confined to two or three foci. Cloudy swelling and fatty degeneration of the internal organs occur as in any acute toxemia.

Symptoms. They are those of septic intoxication plus local symptoms. The constitutional symptoms are too well known to need mentioning. Locally the patient complains of pain in the extremity, limps around for a few hours or days, without definitely locating the point of distress. Then quite suddenly, as pressure begins to manifest itself, the pain becomes excruciating and the child will locate the pain very definitely, provided he is still conscious. After two or three days some edema usually manifests itself, and with it occasionally some fluctuation in the adjoining joints. The characteristic tenderness over the epiphysis now becomes well marked. After several days the pain is suddenly relieved. The pus has burrowed through the compact bone and the symptoms have changed from those of osteomyelitis to those of a phlegmon.

Differential Diagnosis. This is the important and difficult problem of the whole subject. With an intact sensorium the differentiation is entirely confined to local affections. With the sensorium

affected it is principally the constitutional diseases that lend difficulty. Indeed, with the sensorium completely gone, and before edema presents itself, the diagnosis is impossible.

A tabulated comparison of the different local diseases with the one under consideration will best bring out the points of differentiation:

ACUTE OSTEOMYELITIS.	ACUTE ARTICULAR RHEUMATISM.
Prostration—Marked early.	Prostration—Not marked early.
Fever—103° to 105°.	Fever—100° to 103°.
Pulse—110 to 130.	Pulse—90 to 100.
Chill—Usual.	Chill—Not often.
Pain—Boring in the bone.	Pain—Cutting over joint.
Swelling—Joint, not for two or three days.	Swelling—In few hours.
Redness—None.	Redness—Usual.
Edema—Nearly always present.	Edema—Unusual.
Tenderness — Confined to small area over epiphysis.	Tenderness — Same over whole joint.

OSTEOMYELITIS.	PYOARTHRITIS AND PYOARTHROSIS
Swelling of joint—Not until two or three days, or not at all.	Swelling of joint—Immediately.
Pain—Confined to bone.	Pain—Confined to joint.
Tenderness—Area over epiphysis.	Tenderness — Same over whole joint.
Phlegmon—Extends away from joint.	Phlegmon—At first confined to limits of joint.

GONORRHEAL RHEUMATISM.

When monarticular same as for pyoarthritis.

When polyarticular same as in acute articular rheumatism.

Constitutional Diseases. Only the more common diseases which are likely to be confounded will be mentioned. These are septicemia, malignant endocarditis, cerebro-spinal meningitis, and typhoid fever.

Septicemia is very frequently a part of an osteomyelitis and almost always where a diagnosis of osteomyelitis is assured, the clinician cannot demonstrate that there is not likewise a septicemia superadded. The constitutional symptoms of the two diseases are identical. The elimination of osteomyelitis depends on finding an infection atrium and absence of local bone symptoms.

In malignant endocarditis the only distinction lies in the history, finding of valvular lesions, the more frequent pyemia, and the

absence of local edema and tenderness as contrasted with osteomyelitis.

In cerebro-spinal meningitis the pronounced rigidity, gradual onset, and above all the easy method of lumbar puncture and finding the diplococcus intracellularis, makes its distinction from osteomyelitis easy.

Typhoid fever is said to present unusual difficulties in diagnosis from osteomyelitis, yet I have never seen a case that presented the slightest difficulty. The onset, blood findings, Widal reaction, and intestinal symptoms are very different, and the sensorium in early typhoid is almost invariably sufficiently intact so that any physician making a careful physical examination could not fail to find the local symptoms of an acute osteomyelitis.

In general, then, the keynote to diagnosis lies in a careful physical examination and observing:

First: The local circumscribed area of tenderness, the central point of which immediately over the epiphysis of the bone is the most sensitive.

Second: The absence of redness or swelling of this area.

Third: The slight edema of the extremity distal to the seat of infection.

Prognosis: Of the five cases which I have seen during my five years of private practice, all died; three were operated upon and two refused operation. All died of sepsis before the infection had invaded the soft tissues. I think the death rate is a good deal higher than is generally supposed, for many pass to the great beyond before a diagnosis is made. If very early operation could be made many would be saved, yet until some remedy which will increase the resisting properties of the blood is found, the mortality will still continue high. It is the reduced resistance of the blood that makes the disease possible, and allows the patient to succumb to sepsis.

Treatment. Indications. In the whole range of surgery I do not know of a condition that calls for more moral courage on the part of the surgeon than in acute osteomyelitis. The chance of damage suits is very great. To operate on a leg that appears to the parents and friends to be perfectly normal; to find in the center of the bone nothing but thrombosed veins with scarce a drop of pus; then to have the patient go right on to an inglorious death—these together form a picture in the memory of the parents that presages future trouble for the surgeon. To let these patients go on and die in five or six days, likewise leaves one open to severe criticism. If we could pick out for operation those cases who have no general

septicemia and leave the others to die unmolested, there would be more credit reflected upon us. But this we are as yet unable to do. We must operate on all and trust to luck that septicemia is not present. I will not operate on any more moribund cases; in other than these we must accept the responsibility and take the consequences.

The time to operate is that of an emergency. I would not wait at all. As soon as you can get plenty of council to agree with you, that is the best and only time to operate. A few hours may mean the difference between death and recovery.

Operation. Mark the most tender point, and if anatomical relations do not forbid, make that point the center of the incision, otherwise select any point that will reach the desired epiphysis. Make a long incision, from four to ten inches in length, down to and through the periostium. Then chisel into the epiphysis. The question now is whether you shall clean out the whole infected area, or merely establish drainage through the cancellous shell. If the infected area includes only one or two inches of the shaft, I prefer to clean it all out. But if the periostium is raised over a considerable portion of the shaft, I simply chisel out a gutter through the outer shell, put in drainage and leave the medullary portion intact. The medulla often retains its vitality when drainage is established and recovery takes place without sequestration. After perforation of the cancellous bone has taken place with resulting cellulitis, nothing more can be done than to let the bone alone and treat the soft tissues by free incision and drainage.

The treatment of a chronic osteomyelitis with sequestrum consists in meeting two indications: First, removal of the sequestrum; second, closing the cavity.

The first is a very simple procedure, the second is always difficult and sometimes impossible.

When to operate is an important point to decide in chronic osteomyelitis. In a general way, the longer one waits, the easier the removal of the sequestrum, and likewise the harder to close the cavity. Naturally we wish a sufficiently firm involucrum to form, that a good splint may hold the bone without bending or shortening. In the bones of the forearm or leg the unaffected bone acts as a splint and there is not the same need for a firm involucrum. In these last cases I believe the proper time to operate is when the involucrum is still compressible and collapsible. At this stage the sequestrum will probably not yet have completely separated, but with care the bone may be cut through sufficiently beyond the dead bone

to insure its complete removal without removing much healthy bone. If a little viable bone is removed no harm is done. The involucrum usually reaches the proper stage of thickening and still allows of collapsing at about four to eight weeks. This is also about as early as the suppuration in the soft tissues will have subsided.

In the case of single long bones it is not a matter of indifference when to operate. Every suppurating cavity will sooner or later lose its power of reproducing granulations. A bone cavity which has endeavored to close itself by filling with granulations, and has had them as rapidly destroyed by suppuration for a year or more, cannot and will not produce granulations so freely as one which has suppurated but a short time. Therefore, the best time to remove the sequestrum is immediately after the involucrum becomes sufficiently firm to hold its form, regardless of whether sequestration is complete or not.

In the early operation the periosteum can be reflected with a periosteal elevator completely around the shaft. Then insert a chain saw and remove the section of the shaft that is necrotic. Close up by suturing the cut edges of periosteum and allow it to collapse. Close the soft tissues with only a trifling amount of drainage which usually can be removed in a week or more.

In the later operation I have had no success with decalcified bone chips where results could not be obtained by ordinary blood clot. The chips have suppurated out every time I put them in. I think you will all agree with me that where a large portion of the shaft is gone we must depend principally on granulation for results. Sometimes more or less can be accomplished toward closure by chiseling away a portion of the involucrum and also by nailing in skin flaps, but these aids depend on conditions in individual cases and often fail to give results when most needed.

ALBUMINURIA DURING PREGNANCY.*

BY O. L. HANSEN, M. D.,

ARGYLE, WIS.

In presenting this subject I wish to give only a summary of its etiology, symptoms and treatment, and having taken very seriously the warnings of lecturers and writers of text-books on the serious results likely to follow the discovery of albumen in the urine of a pregnant

*Read before the Lafayette County Medical Society, Shullsburg, July 12th, 1904.

woman, I have tried to ascertain a little more definitely how prevalent this condition is and in what percentage of cases these warnings are justified.

Following the injunction given as a principle in obstetrics by all writers on the subject, many obstetricians make a routine practice of monthly examinations of the urine during the first six months of pregnancy and every two weeks during the last three months.

Others again only make such examinations when suspicions are aroused by a patient's complaint of headache, disturbance of vision, or edema. In the first case the routine examination may reveal the presence of albumen without any symptoms having been noticed by the patient; in the latter case—with all the more prominent symptoms present—albumen may not be found. If present, at whatever period and in whatever amount, the physician is at once confronted with the question as to the effect, if any, it will have on the woman during her puerperium and afterward, having in mind the more serious results of premature delivery, eclampsia and chronic Bright's disease.

The etiology of albuminuria during pregnancy is still open to question. Of the more common theories may be mentioned the following:

1. Obstruction to ureters by gravid uterus, a purely mechanical action, producing its effect on the parenchyma of the kidney by overdistention.

2. In a similar way the mechanical pressure of the gravid uterus upon blood vessels—veins, arteries, or both—so as to disturb renal circulation.

3. Increased blood pressure in vessels of kidney from general arterial tension throughout the body owing to cardiac hypertrophy incident to pregnancy.

4. Increased functional activity of kidneys during pregnancy to excrete waste products of fetus.

5. The alleged hydremic condition of the blood during pregnancy.

6. The circulation in the blood of certain imperfectly oxidized metabolic products.

7. Lange found in an observation of twenty-five pregnancies that the usual hypertrophy of the thyroid gland did not occur. In twenty of these cases there was albuminuria.

The observer making his routine examination will probably discover the presence of albumen before any other symptoms are manifest, and a microscopic examination reveals in the urine renal

epithelial cells, hyaline, epithelial, and fatty casts and red blood corpuscles. Tube casts may be present without albumen and albumen may be present without casts. (KING.)

The urine may be high colored, diminished in quantity, or suppressed. The color is of no particular significance, but the diminished excretion or suppression are by far the most important of the premonitory symptoms because they show the lack of elimination of waste products and the accumulation of toxines in the circulation.

The nervous symptoms are usually called to the physician's attention by the patient, who complains of almost constant and severe headache, which ordinary methods of treatment do not seem to relieve, nausea, vomiting and impaired sight and hearing; attacks of vertigo may occur which grow more pronounced as the period of confinement draws nearer. Breath and perspiration may become ammoniacal and the body may become edematous. The edema may affect only the face, or the upper extremities, lower extremities, or the entire body. It is stated that a favorable prognosis is indicated when symptoms are late in developing and when dropsy affects only the lower limbs. When the symptoms disappear, and the albumen becomes less and the amount of urea increases, the outlook is good. With edema of face and hands, of upper and lower limbs or of the entire body, and when the albumen increases and the amount of urea decreases, the prognosis is unfavorable.

As to treatment, it is more hygienic than medicinal. It may be summed up as eliminative, and a milk diet.

In trying to estimate the prevalence of albuminuria in pregnant women the statistics present such a wide range of percentages that the result is confusing.

Tarnier's collection of statistics shows the proportion of albuminurias to be about 5 per cent. King's estimate is from 2 to 20 per cent., as given by Williams. Trautenroth, counting every case in which a trace of albumen could be found, gives it as 50 per cent. As quoted by Williams, a report of H. M. Little of Johns Hopkins, shows in a series of 1,000 cases traces of albumen in 50 per cent. Albumen in considerable quantity with tube casts was found in 7.3 per cent. Williams comments that as the urine was not obtained by catheterization it is probable that in many of the cases the trace of albumen was due to contamination by urethral or vaginal discharge. Accepting this comment as logical it only tends to render all statistics of still less value, as it is doubtful if many experiments are so carefully conducted. He accepts the results when a large per cent. of albumen was

found and especially when substantiated by the statement that nearly every patient in that group presented symptoms of toxemia. In the first group there were no serious disturbances.

In a limited experience, where it is admitted that it is not made a routine practice to examine the urine of every pregnant woman, a considerable percentage of cases—when examinations have been made on the strength of symptoms given—has revealed the presence of albumen, usually in very small amounts. In but two of the cases in which albumen was present did any of the possible results follow as given above.

Case 1. On April 17th, 1903, was called to see for the first time Mrs. F., age 28. She had had one previous normal confinement and one miscarriage. I found her in the last month of pregnancy, with a history of continuous headache for many days. On this day, as she described it, she suddenly became dizzy and everything turned dark. Her face was puffed and the entire body edematous. The urine showed a small quantity of albumen. She was placed on a milk diet and given a daily purge of Epsom salts. April 24th, I was called to attend her in confinement. The body was more edematous than ever and the labia enormously so. The headaches and dizziness had persisted to the last. With forceps and chloroform ready I awaited results, but was pleasantly surprised by a normal, quick confinement with no symptoms of convulsions. After delivery the albumen became more pronounced, but she was out of bed on the twelfth day. She was kept on tonic treatment with attention to bowels and diet and seemed to be doing fairly well. Was called to see her on May 14th, and found her in bed with a temperature of 101°. I irrigated the womb and continued treatment. The next day the temperature was 102°, the urine showing some albumen. May 16th the temperature was 104°, May 17th 105°, and the patient sinking into stupor. She remained in that condition for 48 hours unconscious and temperature of 105°.

As to treatment, well—it probably had nothing to do with the case anyway and the only thing worth mention was the desperate clinging to rectal saline enemas as large as could be retained. When coma was fully developed the fluid injected returned almost at once. The night of May 19th there occurred after a saline enema a large evacuation of the bowels. The next morning the coma was less pronounced, and the temperature less, and from that time the recovery was uneventful.

The patients' urine still shows albumen indicating the existence of one of the results of albuminuria of pregnancy—a chronic Bright's

disease. As to whether the patient was albuminurie before pregnancy I am unable to say.

The following case was not in my care, but under my observation from the first:

CASE 2. Mrs. G. Primipara, age 19, always previously in the best of health. March 11, 1904, called for medical advice in regard to a pain in the back which she located over the kidneys. She was then in the eighth month of pregnancy. Examination of the urine revealed a small amount of albumen. She was at once placed on the appropriate treatment with the result that the albumen would disappear, to return at intervals, but the pain was not relieved. The patient then, on her own initiative applied a plaster to the painful spot, and claimed prompt relief from its use, and, as was afterward discovered, exercised prompt disregard of directions in regard to bowels and diet. On the night of April 16th, patient was seized with convulsions which recurred at frequent intervals, with complete loss of consciousness, until the next afternoon, when version was performed and a living child delivered. Consciousness gradually returned, the albumen diminished in quantity and the urine is now clear. Recovery was uneventful and patient is now well. During the course of her pregnancy and until convulsions occurred, there were absolutely no symptoms of which the patient complained except the pain in the back.

From my own experience and reading, I do not think there is any way of telling whether or not the presence of albumen in the urine of a pregnant woman will lead to serious results. The presence of tube casts with albumen would seem to be of graver significance than albumen alone, but even that is not a sure indication of trouble. It would be a decided advance if some method of examination were known, for the fact of finding albumen in so many cases where no bad results follow, tends to carelessness in the treatment of the condition. We do not take pains to know whether or not our patients are regarding instruction as to bowels and diet which they are very apt to neglect. A more complete understanding of the etiology may make the problem clearer, and until then our best hope would appear to be elimination, as soon as the condition is discovered.

WISCONSIN MEDICAL JOURNAL.

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EDITORIAL COMMENT.

THE PROCEEDINGS OF THE HOUSE OF DELEGATES.

We print elsewhere in this issue of the JOURNAL the proceedings of the House of Delegates of the last meeting of the State Medical Society.

While the division of the convention into a scientific and a legislative body necessitated keeping the members uninformed as to the details of the legislative proceedings until their publication, this plan has much positive merit. The many questions that were presented for discussion in the House would doubtless have impeded the quiet and dignified progress of the scientific program had the old rule prevailed, and we must feel a deal of satisfaction at the character of the work done by the House of Delegates, and the speed and ease with which it was consummated.

We would call attention to the Secretary's brief historical resumé of changes that had been instituted since the previous year, written in his characteristically lucid and entertaining style.

The table on page 210 gives a satisfactory view of the membership enrollment by counties, and the totals. The number of non-members (842) is much larger than ought to be the case, and in the course of the present year this figure will doubtless be much reduced. The formation of district societies in accordance with the suggestions offered in the Constitution of the A. M. A. was discussed liberally, and while some hardships may result to a number of existing societies were they to be replaced or cut into by the new organizations when formed, it would seem as though there need be no actual discontinuance of the older societies—at any rate not for one or more years. If any advantage may be demonstrated by the district organizations, as will develop in time, the natural laws of the survival of the fittest will solve the problem and decide the lease of life of the organizations in the disputed territory.

It were idle to comment upon the probable success of the new method for conducting the scientific program as projected for the coming year, i. e., dividing the work into two general sections, each to have an equal and equable share of the work in the general as well as the special branches. While this plan will admit of a more comprehensive program, and an unlimited discussion upon all papers, and will allow the members to attend the reading of papers of their own choice, this wandering from room to room—especially with the great uncertainty as to the time of reading of individual essays—will prove distasteful to many who are accustomed to join the general sessions and are faithful in their attendance at the meeting. There are pros and cons, doubtless, and it remains but to carry out the experiment and demonstrate its success or failure.

In any case, recognizing the energy and ability of the chairman, Dr. W. H. Washburn, under whose leadership the program will be formed and carried out, we may look forward to a meeting not inferior to the last one in general interest and unquestioned merit, and, possibly, to new features that will lend even an added value to its scientific excellence.

AN EXPLANATION.

An editorial in our last issue on the "Student Abortionist" has, we regret to hear, given rise to ill feeling. This is unfortunate, because to stir up strife and bitterness in the profession, or to single out and injure any medical school whatsoever, was no motive in the composition of the article in question. The instance cited was made the text of a "sermonet," which is general in its application, but we confess that—the case in point having been so recently before the public—our article may naturally have drawn attention unduly to the college at which the student charged with the crime had matriculated.

We are informed that, as soon as the case was brought to the attention of the college authorities, the man's name was immediately stricken from the school roster—certainly a commendable act. While doubtless there is much truth in the editorial comment upon this subject as stated in our contemporary, the *Milwaukee Medical Journal,* and we must appreciate the validity of the argument that even education does not force a standard of morality upon one who by heredity or inclination leans to the bad, we cannot but feel that in the main the general statement holds good, that with poor mental equipment moral obliquity goes hand in hand; and that as we begin early to educate men and select them for their life work—whether for professional careers or otherwise—we will enhance their value to themselves, force upon them refined and cultured surroundings, and reduce to a minimum crime originating in this class. This is what our editorial was intended to convey. While, as we are creditably informed, the man against whom these charges have been brought is a person of education and has himself been an educator, this does not vitiate the force of the argument, and we believe that in time, as requirements are placed on a high plane and applicants are scrutinized closely, such cases will be materially lessened.

We wish to reiterate that it was foreign to our desire to single out any one institution as offending by a lack of preliminary requirements and proper scrutiny of students' qualifications, but hoped our remarks would be considered as applying to all schools alike; at any rate, that certainly was the construction we ourselves placed upon the editorial, and the motive was simply a desire to help by every available means, to show up errors—wherever and whenever they confront us—and thus to assist in elevating the moral standard of all schools that graduate physicians.

A PLEA FOR STATE MEDICAL HISTORIES.

The movement for the organization of the physicians in the various sections of the country into bodies of scientific, earnest men, being well under way, the time is ripe for the consideration of another field of effort, not so important materially, but nevertheless well worth serious thought: we refer to preserving in permanent form the records of those who have preceded us in the work of healing the sick.

The innate modesty of the physician seems to forbid the exploitation before the public at large of the accomplishments and successes of a fellow practitioner, a feeling which, while admirable, is carried somewhat to extremes

A striking example of this was seen recently in the contest for

the selection of names which should grace the panels of the Hall of Fame in New York. The lack of insistency, nay, the indifference of the medical profession in compelling a recognition of the work of our illustrious dead was truly painful. What profession or calling can show instances of greater self-sacrifice, greater self-denial, than are to be found in our medical great—in their efforts to aid the masses and to protect them from affliction? And yet, they were relegated to a position subordinate to that of the poet, the statesman, the financier.

There is but one corrective. While a few names stand out preeminently in the medical history of the world, every state has had its medical heroes, who, at the call of suffering humanity, braved the fierce storms of the winter, the toils and hardships of a trackless forest. These men who "blazed the trail" for us deserve some form of recognition, and the best and only way we can honor them sufficiently is to emblazon their names on the pages of a state medical history. Let each state society delegate some physician or physicians for this work, giving it its full sanction and assistance. Let each member of the profession in the state take personal pride in contributing whatever facts of historical interest he may possess, and let the whole be edited as a medical monument in that state. Collectively these histories would be an exceedingly valuable record to place in the archives of a national medical library.*

NEWS ITEMS.

Ralph Chandler, M. D., Rush Medical College, 1886, one of the most brilliant young surgeons of Milwaukee, died August 12, aged 41, shortly after an operation for intestinal obstruction. He was a member of the American Medical Association, State Medical Society of Wisconsin, Medical Society of Milwaukee County, Milwaukee Medical Society and Association of Military Surgeons of the United States; captain and assistant surgeon in the Wisconsin National Guard for many years, and surgeon of the First Light Battery; for several years on the staff of the Emergency and Children's Free Hospitals.

At a special meeting of the staff of the Children's Free Hospital, held on Aug. 16, the following resolutions were passed:

WHEREAS, The staff of the Children's Free Hospital of Milwaukee has learned with profound regret of the death of our late associate, Dr. Ralph Chandler, be it

Resolved, That the staff, as well as the profession at large has lost a

*Dr. George P. Barth, of Milwaukee, has been working for the last four years on the medical history of Wisconsin, and though he has gathered a vast amount of material in that time, the work is far from complete. He would be very thankful for any bits of history or personal reminiscences of pioneers.—Ed.

valued member, whose attainments as a physician, whose character as a man, and whose steadfastness as a friend were esteemed by all who knew him.

Resolved, That in the death of Dr. Chandler the Children's Free Hospital especially, has lost one of its staunchest friends and most unselfish supporters, one whose services in the interests of the patients were always kindly and generously given.

Resolved, That a copy of these resolutions be sent to his family as an evidence of our sincere sympathy and of our respect and esteem for our late associate, and be it further

Resolved, That a copy of these resolutions be furnished the medical press for publication.

Additions to the Faculty. The following new instructors have been added to the faculty of the Milwaukee Medical College for the coming year:

W. G. Doern, M. D., Fort Madison, Ia., Professor of Anatomy; Peter H. Jobse, M. D., Professor of Genito-urinary and Clinical Surgery; George H. Fellman, M. D., Professor of Pediatrics; O. E. Lademann, M. D., D. S., Instructor in Physical Diagnosis; H. S. Steenberg, M. D., Instructor in Biology and Materia Medica; W. T. Nichols, M. D., Clinical Assistant in Gynecology; Julius Kleinboehl, M. D., Clinical Assistant and Demonstrator of Operative Surgery; Nelson W. Reynolds, M. D., Director of X-ray Laboratory; James W. Pegram, M. D., Clinical Assistant and Quiz-master in Surgery; L. C. Tisdale, M. D., Clinical Assistant and Demonstrator of Operative Surgery; Fred H. Strauss, M. D., Instructor in Skin and Venereal Diseases; Adolph Hess, M. D., Demonstrator of Anatomy; Herman Stolte, M. D., Clinical Instructor in Rhinology and Laryngology; William A. Symon, M. D., Free Dispensary Clinician; A. J. Taugher, M. D., Demonstrator of Anatomy; G. M. F. Scholz, M. D., Clinical Assistant in Medicine; C. W. Graham, M. D., Clinical Assistant in Gynecology.

Dr. H. A. Lathrop, a well-known physician of Marshfield, has been nominated by the Democratic party for Lieutenant Governor on a ticket with several other tax payers. The profession is "looking up." In some quarters it is suspected that the supply of lawyers is running short, and it is even hinted that the legal gentlemen in the next general assembly may not be in the majority. But this can hardly be true.

Dr. L. W. Zochert, of Hingham, has won his suit against Dr. Blekking, of that village, whose practice he recently bought out with the condition that Dr. Blekking would not practice medicine in neighboring towns. The latter resumed practice, however, and Dr. Zochert brought suit against him. Judge Kirwan decided the suit, granting Dr. Zochert an injunction against Dr. Blekking.

State Registration of Trained Nurses.—A movement is now on foot in Iowa, Massachusetts, Pennsylvania and other states to secure a law providing for state registration of trained nurses. Such a law has already been enacted in the states of New York, New Jersey, Virginia, Maryland and North Carolina.

The Riverside Sanitarium for nervous and mental diseases, Milwaukee, of which Dr. F. C. Studley is superintendent, has been incorporated with a capital of $40,000. A new site will be selected and a modern building erected.

Dr. William Allen Reed died at Necedah, Aug. 6, at the age of 47 years. He graduated at Rush Medical College in 1881.

Library Donation.—The books of the late Dr. Ralph Chandler have been given to the Children's Free Hospital as a nucleus for a library for that institution.

The Canadian Medical Association has petitioned the Dominion Government to regulate the sale of patent medicines.

Removal.—Dr. Walter Pretts, formerly of Superior, has located at Platteville, Wis.

CORRESPONDENCE.

EDITOR WISCONSIN MEDICAL JOURNAL:

Twenty miles northeast of Boston is a village called Stow. Here there is what is known as "Red Acre" farm. It is a farm for worn-out, ill-treated and crippled horses. A young woman has here provided a home for friendless horses. In this institution no color line is drawn, there is no difference of school or nationality, no race prejudice. All kinds of horses and mules are welcome, if friendless.

Cats have their benefactors who provide them with homes and care. Dogs have their days, and when the nights are long, they rest in beautiful graves. This expression of sympathy for their mute friends is both pathetic and commendable. But did anyone ever hear of a home for friendless, ill-treated, worn-out doctors? There are homes for those weak in mind, weak in body, weak in morals, weak in finances, both young and old. There are sanatoria for presumptives and consumptives. There are water cures and Keeley (kill'em) cures, but there is not one sanatorium for doctors. We have seen doctors donate to libraries and to universities, but does anyone know of a donation by a wealthy doctor to his less fortunate colleagues?

In every community there are able, hardworking, honest doctors, who are poor financiers. When they have spent the best part of their lives, thoughts and energy, they often awake to find themselves penniless, with broken health. Their only capital, their physical and mental health, has slipped away from them, as has their money between their fingers. No one has any use for him—the sick and worn-out doctor.

It is a prevailing idea of the public that a doctor ought to be in independent circumstances, and that it is his own fault if he is not. Personal, domestic and professional expenses keep a doctor constantly in the harness. Irregular and insufficient hours for sleep, hurried and disturbed meals, exposure to the inclemencies of the weather, with no time for proper care of self, no relaxation from the responsibilities thrust upon him, too conscientious to cry enough—in fine—unable to administer his physical and financial affairs, in his rush to alleviate the ills of others "Herr Doctor" sooner or later becomes comparable to the broken-down, helpless and apathetic old cart-horse.

Many a good man could be restored to health, many deserving escape the county hospitals, if there were a home for sick and friendless doctors, a home provided by and for doctors. Let us have a "Red Acre" farm here in Wisconsin for our broken down brother-beast-of-burden.

JOHAN DE BESCHE, M. D., Milwaukee.

THE STATE MEDICAL SOCIETY OF WISCONSIN.

ORGANIZED 1841.

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2nd Dist., J. G. Meachem, - - Racine

FOR TWO YEARS.

3rd Dist., F. T. Nye, - - - Beloit
4th Dist., E. S. Hooper, - - Darlington

FOR THREE YEARS.

5th Dist., J. F. Pritchard, - - Manitowoc
6th Dist., J. S. Walbridge, - - Berlin

FOR FOUR YEARS.

7th Dist., W. T. Sarles, - - - Sparta
8th Dist., T. J. Redelings. - - Marinette

FOR FIVE YEARS.

9th Dist., D. L. Sauerhering, - Wausau
10th Dist., E. L. Boothby, - - Hammond

FOR SIX YEARS.

11th Dist., J. M. Dodd, - - Ashland
12th Dist., A. T. Holbrook, - - Milwaukee

Next Annual Session, La Crosse, June, 1905.

The Wisconsin Medical Journal, Official Organ.

SOCIETY PROCEEDINGS.

MINUTES OF THE FIFTY-EIGHTH ANNUAL MEETING OF THE STATE MEDICAL SOCIETY OF WISCONSIN, MILWAUKEE, JUNE 22, 23, 24, 1904.

PROCEEDINGS OF THE HOUSE OF DELEGATES.

Tuesday Evening, June 24, 1904.

The House of Delegates of the State Medical Society of Wisconsin held its first meeting at the rooms of the Milwaukee Medical Society, Goldsmith building, Milwaukee, Tuesday evening, June 21, 1904, at 8:15 o'clock.

The House was called to order by the president, Dr. F. E. Walbridge.

The roll was called by the secretary and the president announced that a quorum was present.

PRESIDENT: The next order of business will be report of delegates to the American Medical Association.

DR. W. T. SARLES, of Sparta: Dr. Seaman and I were present. Dr. Evans was unable to attend as a delegate. It seems that with our present state membership of 1225 we were entitled to three delegates at the national meeting. The constitution was changed at the last meeting, following a written resolution to that effect at the last annual meeting in New Orleans, and

changed quite materially as to the national body, but not affecting our state and organization plan at all. There was a very strong sentiment there in favor of national legislation to give to that body a charter of a national character, and in doing that they changed the wording, as you will notice when you get the new constitution, as to the object of the association, so as to bring it under the educational head purely, and in that way they hope to get a Congressional act that will give them an individual charter to do business anywhere in the United States. There was very little opposition to the change in the charter, as it did not affect anything regarding the organization plan.

There was considerable objection to the proposed plan of grouping states into Councilor Districts as Branch Societies. They thought it was loading down the original plan too much, and after discussion it was referred to the Board of Trustees to report upon a year from now.

The American Medical Association has grown very materially, there being between 15,000 and 16,000 members at the present time. The number of members of the county and state societies, is between 45,000 and 46,000, and these are eligible to membership in the American Medical Association.

The plan of doing the business of the national body separate from the scientific work, has been very much to the benefit of the association.

The reports of the secretary and treasurer—in fact, all the details regarding the annual meeting—are printed in the *Journal of the American Medical Association*, and of course can be had more accurately than I could give them to you. Our proportion of the members of the American body as compared with our membership in the state, stands 38 or 39 per cent., and the highest I think is 42 per cent., which makes us among the first five states in the union to have the membership in the American body in proportion to our membership in the state and county societies. They still propose to keep their dues the same, $5 a year including the journal, and concluded to make no change whatever in the plan of organization of the county and state societies.

Dr. G. E. Seaman, of Milwaukee: I have nothing to add to what Dr. Sarles has said. I believe those were the important things that were passed upon at that meeting.

I would suggest that the matter that was brought up at the American Medical Association of forming district societies, so to speak, is a matter that the State Society ought to take some interest in and investigate with a view of having something to say about it when it finally comes up for action. I think it deserves very careful consideration before being adopted by the American Medical Association and the State Society.

President: The next matter in order is the report of the councilors.

Dr. J. S. Walbridge, of Berlin, 2nd district: Mr. President. I did not prepare any written report. All the statistics are in the hands of the secretary, who is better prepared to present them to you than I am, and they will be published, undoubtedly. All of the counties in the 2nd district have been organized. Adams county, with which I have had nothing to do in organizing, although I made quite a strong attempt to do so, has, as I understand, been united to Juneau county, so that that completes the organization of all the counties in the 2nd district, as I said. From correspondence and personal interviews with the men I have seen in the different counties I

know that they have manifested considerable interest and quite a good deal of enthusiasm in the new organization plan, and I experienced much less difficulty in organizing the counties in my district than I expected. It was a task that I dreaded, but when I came to get at it and get in touch with the different counties, I found that the organization was accomplished without much difficulty.

While I think the reorganization will increase the attendance in the State Society meeting, I think the greatest good will be accomplished in the county societies. In Dr. Pritchard's district it was found that Waushara county did not respond to his attempts at organization. So it was decided by the council that I should try to unite it with Green Lake county, which I have done, and this makes Green Lake and Waushara a good, strong society. While all the doctors from Waushara county are not yet in, we have our next meeting at the county seat of Waushara county and I think we will gather them all in in September.

SECRETARY: I will briefly report in place of Dr. Meachem of the 1st district, that all of the counties of that district have organized quite satisfactorily, with the exception of Racine. In Racine county the difficulty has been to adjust our plan to the existing conditions there. It seems there had been there for some years a county society which included all the physicians in the place, for purely business purposes, a sort of protective association, but they have had regular meetings and called themselves a county society. The difficulty arose in reconciling the idea of a county society in affiliation with the State Society, with what already existed. There ought not to have been any difficulty, but the result has been that a majority of the physicians of Racine county have thus far preferred to remain in the organization that already existed, to joining the regular county society, which I think now is entirely separate. The other counties are all satisfactorily organized and are doing excellent work.

SECRETARY: Dr. Sarles, perhaps, can report for the third district.

DR. SARLES: I do not know how Richland county stands.

SECRETARY: Richland county is the last county to send in its report. With this exception we have a report from every county in the state. I have been urging the Richland county people for several weeks to send in their report. Dr. De Lap wrote me day before yesterday that they certainly would organize their society on Monday night—that was last night—and if I did not get the membership roll and the fees, which I told him must accompany the roll in order to make it valid, at Madison, that I would get them here. So I expect we will get them tomorrow.

Fourth and fifth districts were called for.

Dr. A. W. Gray, secretary Medical Society of Milwaukee County, was called upon for a report.

DR. A. W. GRAY: In the absence of Dr. Kletzsch I can make the report on Milwaukee. We have completely organized in this county, with 236 members at present, and 28 members who have not paid up their dues, and are, therefore, suspended. There are still 389 in the county outside of the society; but, of course, this comprises a great many irregulars and men of different schools. The society difficulties in this county were entirely over-

come shortly after the last meeting of the State Medical Society, when the two county societies in existence were amalgamated, the Medical Society of Milwaukee County voting in all of the members of the Milwaukee County Medical Society (which was the contesting county society), and since that time there has been harmonious work in the county society.

Dr. B. M. Caples will report for the Waukesha County Society.

Dr. B. M. Caples: Waukesha county, I believe, was the second county to organize under the new plan. There are 48 physicians in the county; 33 of them belong to the county society. That is practically all there is to report. Notices have been sent a number of times, but this is the best we can do so far. All have paid, I believe, except one member, and he will doubtless send his dues soon.

The report of the sixth district was then presented as follows, by Dr. G. V. Mears, of Fond du Lac:

Mr. President and House of Delegates: I was appointed councilor of the sixth district in December, to succeed Dr. Reineking, who had moved out of the district. At this time Sheboygan county had reorganized its society, and Fond du Lac county had organized a society to conform to the new order of things. In January, Dodge reorganized, and Washington and Ozaukee organized new societies. Ozaukee is the smallest county and has ten members. Dodge has 44 eligible physicians in the county, 22 are members of the society, and Dr. Sears said that by the time this report would be read most of those out at the time of his report would become members of the society. Washington has 18 physicians, 14 of whom are members. Fond du Lac has 42 eligible physicians, and 35 are members. I cannot give the standing of Sheboygan, as I failed to get a report. All of these societies are in good working condition, their meetings are well attended and a good class of work is done. Before the reorganization of the State Society it was impossible to keep up the scientific interest in each one of these counties to a point where a society could be kept together. The present outlook is most favorable; while it is not possible to get every eligible man in and keep him in, the present plan will, I think, in a reasonable time do its work, and we will find the minimum number of the profession out of the fold.

Dr. W. T. Sarles, of Sparta, presented the report for the seventh district, as follows:

When we started the organization, out of eight counties in the seventh district, two had societies, La Crosse and Eau Claire, and they simply changed their charters to conform with the charter provided by the American Medical Association, so I know very little as to how much they have gained relatively. The county of Monroe had no society and they had only six members of the state society in the county, but they started their society with 20 members, showing the relative increase to be large. I tried to get the counties of Jackson, Trempealeau, Pepin and Buffalo started in individual organizations, but found that there were only three or four men in Jackson county who would do anything towards organizing, and one of those has left, and really there are only two or three men in Jackson county that it would be possible to get into a society. It was not as bad as Adams, however, which only had one man practising in the county, and he moved away. We wrote him asking if he would join Juneau county, and he replied that he would if he

lived in the county, but he had sent his letter to the man who had bought him out, and he thought he was eligible. Dr. John Lyman, of Eau Claire, went down and aided in forming the Clark county society, and succeeded in organizing a good, strong association, of about 20 members. Then he consented to go down to Durand and organize the Buffalo-Pepin society, which he succeeded in accomplishing, forming a society with about 18 members. I was to meet the doctors of Trempealeau and Jackson counties at Galesville the same day and form a society there, but was unable to get there, and I sent Dr. C. M. Beebe over, and they held a meeting, but seemed to be averse to taking in Jackson county. There were only two men likely to come in, one man from Melrose and one man from Merillan Junction.

The councilors at their January meeting decided that in view of the number of physicians in the counties of Buffalo, Pepin, Trempealeau and Jackson yet unorganized, that two societies be made of the four counties, to be known as the Buffalo-Pepin County Society, and the Trempealeau-Jackson County Society, which was accomplished.

Joseph Littenberger, of Trempealeau County: It is not that we were averse to taking the gentleman in, because the only one who was there seemed very congenial to us, but it was due to the geographical and railroad facilities. Trempealeau county has 20 physicians, all located on the Green Bay & Western, and we can have our meetings at the different places along the Green Bay & Western road without inconveniencing any of the doctors; whereas, if we were affiliated with Jackson county it would mean a cross country drive for some of us of 50 miles, as there are no railroad connections, and inasmuch as there is only one person there, he, upon the advice of Dr. Beebe, joined the Trempealeau society until his county should be taken in by some other county. It was not that we had any animosity at all to Jackson county.

Dr. J. F. Pritchard, of Manitowoc, representing the eighth district, reported as follows:

I have a detailed report. I do not know that you will care to hear it all. The last county organized was Calumet, with six members. Its secretary has made a detailed report that probably is not particularly interesting here, and all the counties are organized fully. I think we have nearly everybody who ought to be in. They have all made reports to the secretary, so I will merely present this as the detailed report, unless you choose to hear it read. There is nothing particularly interesting in it except to the districts.

On motion made the report was placed on file.

Dr. T. J. Redelings, of Marinette, then presented the report of the ninth district, as follows:

In relation to the 9th district, I wish to state that all the counties in the district are fully organized. I have in my hand the application for a charter for the Door county district, and I expect the application for a charter from Kewaunee county by mail before this session is over. In fact, I expect it to be here this evening.

The several societies in the 9th district are fairly well organized. Brown,

Oconto, Outagamie and Marinette counties were organized very early—in fact, the organization was so spontaneous that I hardly realized that I was going to have anything to do in the 9th district; but Door and Kewaunee counties hung out until the very last; and it was due to a little misunderstanding among men in the other places in these two counties, but upon visiting Sturgeon Bay and Kewaunee, I very easily got the men together, and they were quite enthusiastic; and I must say that it was a real pleasure to get out and organize these societies. Their tardiness is a matter for which I assume all the responsibility. I made repeated efforts to meet them and for some reason or other it seemed utterly impossible for me to get away at the appointed time, and it dragged until the eleventh hour.

Of the several counties, the membership—the percentage of members to the number of physicians in the county—varied from about 40 to 80 per cent. Outagamie county has a very large proportion, has about 36 members, and there are 12 outside of the society with applications on the table. Oconto county apparently is the weakest of the several societies in our district, but I am really at a loss to know just why this is so; I find it very difficult to get replies from Oconto county. The replies are inadequate, not to the point, and I am unable to say just what their membership is.

Marinette has about 80 per cent. of the physicians in the city and only about 50 per cent. in the county, but our county is so large and it is so cumbersome to get to the county seat, that men are in a measure pardoned for their non-attendance and non-affiliation. Some of the more progressive men have joined, knowing very well that they could not be present with us at our meetings.

In most of the counties the meetings are bi-monthly, and several of the meetings are being held quarterly. The reception which I got when I went out has thoroughly convinced me that the progressive men in our district are fully in accord with the movement, and that ultimately great good will come from the reorganization plan.

SECRETARY: In reference to Oconto county, I think the delay in organization was due to the fact that Dr. White, the secretary, removed from the county, and there was some difficulty in getting a new secretary appointed. They have, however, a society with seven members and there are only six non-members in the county.

DR. J. M. DODD, of Ashland, presented the report of the tenth district, as follows:

The organization of the 10th Councilor District was made complete by the formation of a district society at Rhinelander on April 8. I had made a personal visit to every county in the district with the exception of Wood and Shawano, which organized themselves, and Florence was united with Forest.

In the vast territory included in the 10th district, comprising 13 counties —almost one-fourth of the total area of the state and one-eleventh of its population—there are 163 physicians, or about one for each 1,170 people, taking as a basis the census of 1900. The number in the different counties is as follows: Marathon, 30; Ashland, 21; Lincoln, 18; Shawano, 17; Wood, 14; Price, 12; Oneida, 12; Taylor, 9; Langlade, 9; Vilas, 8; Iron, 7; Forest, 5, and Florence, 1.

I found the physicians throughout the district, for the most part, young, active, energetic men, of more than the average ability, just such material as we need in our State Society. At the time the reorganization movement was brought to bear on these counties no local organization existed worthy the name, with one or two possible exceptions. I first made an effort to get by mail from the different counties a list of the physicians and an expression from them regarding the formation of county societies. I accomplished very little in this manner, though during the year I sent out over 600 letters to the physicians of the district, directly bearing on the matter. However, where the work was once under way and personal visits were made, the councilor had no reason to complain of the enthusiasm shown, and very few eligible physicians withheld their names from the membership rolls of the county societies. I found throughout the district a marked absence of the usual professional jealousies and differences so common among physicians—all were apparently busy with their own affairs, willing to treat the others as they would wish to be treated, and all apparently ready to lend their aid and support to the movement which promises so much good to the profession in general.

In the 13 counties we now have 12 societies; some of them, it is true, are quite small, yet distinct organizations and entitled to representation in the House of Delegates, which gives them a voice in the state organization and affords an incentive to the maintenance of separate organizations.

Realizing the difficulty of keeping up interest among the members of the smaller county societies, we have organized a district society, which will probably meet four times a year and afford the physicians opportunities for association with the physicians of neighboring counties in sufficient numbers to have interesting and profitable meetings.

Our District Medical Society meets at Ashland on Sept. 15, and it is confidently expected that it will be an enjoyable and profitable meeting and largely attended by the physicians of the district. The organization is now practically complete. It remains to be seen how well it can be kept up and this will depend on the interest taken by the members and the work done by the officers of the district and various county societies, and it is to be hoped that a cause which means so much for the common good of the profession will find a firm supporter in every member whose name appears on the membership roll.

Dr. E. L. Boothby, of Hammond, then presented the report of the eleventh district, as follows:

As I suppose you all know, the 11th district was organized before the first council meeting in October last, which was perhaps rather early in the season, but I pushed the work as rapidly as possible after the meeting a year ago, in order to get through before cold weather, and succeeded in making a complete organization of every county in the district, not, however, forming a county society out of every county, but putting two or three together in some instances, organizing eight societies out of the 12 or 13 counties in the northwestern part of the state, which is next to the largest councilor district in the state.

About the first of June I drafted a paper and sent it to the secretaries of these eight county societies, asking them to report to me, to fill this

paper out and send it to me, so that I could report to the House of Delegates at this session the exact condition of each and every component society in my district. The tabulated report is as follows:

	Charter Members	Joined Since Organization	No. Licensed in County	No. Practicing Under Registration Act (non-lic.)	No. Irregular Practicing Without License or Regist.	No. Dropped for Non-Payment of Dues	No. in Good Standing June 1, 1904	Non-Affil. Eligible
Bayfield	4	0	9	0	1	0	4	4
Chippewa	14	0	19	2	0	2	12	7
Dunn	10	5	....	....	0	2	13	4
Brown-Polk-Gates	13	13	....	....	1	1	25	6
Douglass	31	0	39	0	0	9	31	...
Washburn-Sawyer-Burnett	8	1	11	....	0	0	9	3
St. Croix	11	3	19	2	2	*1	13	7
Pierce (no report)	....	....	....	....	....	....	....	...
Total	91	22	97	5	4	6	107	31

*Removed from County.

There has been very little friction in the 11th district. Some few questions have come to me from Superior, but I have not been called upon to go there to settle any difficulties.

PRESIDENT: Dr. Meachem, councilor of the first district, is now present. We will listen to his report.

DR. JOHN MEACHEM, of Racine: The work of reorganization has proceeded fairly satisfactorily. All of the counties are organized with the possible exception of Racine county, where there has been some little trouble within the last month because the secretary whom we elected was a homeopathic physician. As he first understood the outline of reorganization he thought he could come into the society all right, but finally changed his mind and resigned. Our vice-president moved out of the county, but otherwise the officers remain the same. We have not been able as yet to elect a successor to Dr. Brown, who resigned as secretary. I assumed his duties, but we expect to have another man in his place soon. Everything is proceeding well in the district except in Racine county, and there we have not very many men in as yet.

In Racine county, which is my own county, we have had for some time what is known as the Racine Physicians' Business Association. A number of times during the last few years the local physicians have attempted to form a society there, generally without success, but finally about a year and a half ago they arranged to get together and organize this Business Association, which comprises all the physicians in the City of Racine, including

eclectics, homeopaths and all others, and it is clearly a business organization. According to their rules, scientific subjects are not taken up at all. They have met regularly once a month. When it came time to organize the county society the physicians in the county were willing enough, but almost all the physicians in the city seemed to discountenance it, and they thought that as long as they had organized a successful business organization, which had been going all right without any friction, and inasmuch as they had tried to organize a society a number of times during the last few years and had always failed, they would not attempt to have two societies, and would rather stick to the local society than anything else. The thing dragged along, and after a good deal of work, during which Dr. Walbridge and Dr. Seaman came down from Milwaukee, we managed to get a very few of the men together and organize. To show you how difficult it has been in Racine to get the men together, I might add that when Dr. Walbridge and Dr. Seaman came down there to meet the physicians, all the physicians were notified twice, by mail and by telephone, and I think there were probably seven or eight there that evening.

Since that time we have not been able to get more than two or three others. There seems to be a very general disposition on the part of many of the men there to let the county society strictly alone and stick to the Business Association. This Business Association meets once a month and has a banquet, etc., and I presume that it is going to be a permanent thing, though I think gradually the county society will increase in membership. One thing is certain, that the two societies will not merge, at least at present. That is about the situation in Racine. Otherwise, throughout the district the organization is well along.

The Treasurer's Report was presented by Dr. S. S. Hall. It is as follows:

TREASURER'S REPORT.

MILWAUKEE, June 21, 1904.

S. S. HALL, *Treasurer*, in account with the State Medical Society of Wisconsin.

DEBTOR.

Cash on hand, as per report June 5, 1903		$1,645 71
Received, from Committee on Banquet	$ 4 50	
from Admission Fees, from Censors	65 00	
from Dues, from Members	976 00	
from Secretary, Dr. C. S. Sheldon	2,734 00	
		$3.779 50
Total		$5,425 21

CREDITOR.

Disbursements (items attached)	$2,243 75	
Balance on hand	3,181 46	
Total		$5,425 21

ITEMS OF DISBURSEMENTS.

1903.			
June	5.	Dr. Bryant Smith, 2 guests banquet	$ 3 00
	6.	Dr. C. S. Sheldon, salary 1903-4	200 00
	8.	C. J. Hambitzer, music banquet	23 00
		Meyer-Rotier Printing Co	11 50
		Jas. M. Fox, decorations	15 00
		E. Gram, drayage piano	5 00
		Doe & Umbreit, legal services	85 00
		Dr. J. R. Currens, expense Committee Legislation	47 92
		Dr. Wm. Jobse, expense Committee Legislation	9 75
		Wisconsin Medical Journal, extra copies	10 00
	9.	Dr. A. T. Holbrook, Western Pass. Association	17 00
	12.	Dr. Wm. Jobse, expense Committee Legislation	1 35
	26.	E. L. Howe, printing and stationery	5 25
July	6.	Dr. A. T. Holbrook, expense	4 15
		American Medical Association, 700 constitutions	5 50
	24.	American Medical Association, blanks, etc	19 50
		H. D. Goodwin, stenographer	143 00
		Wisconsin Medical Journal, account June and July	104 84
Aug.	1.	Wisconsin Medical Journal, account June and July, bal.	19 84
	13.	American Medical Association, 300 Principles of Ethics	1 50
		Dr. R. B. Cunningham, refund	5 00
Sept.	2.	American Medical Association, 100 applications	1 00
		Wisconsin Medical Journal, account August	64 59
	5.	State Journal Printing Co., account September	44 95
	18.	State Journal Printing Co., account	3 50
		American Medical Association, constitutions	27 00
	21.	Globe-Wernicke Co., supplies	36 76
	24.	American Medical Association, records and applications	8 00
Oct.	5.	Dr. J. F. Corbett, refund, Waupaca County	2 00
		Wisconsin Medical Journal, bal. August and September	76 66
	13.	Dr. E. L. Boothby, expense	44 55
	15.	Marinette County Society, refund	4 00
	16.	Dr. H. B. Tanner, refund	2 00
		E. L. Howe, printing, treasurer	75
	24.	Dr. C. S. Sheldon, additional compensation	100 00
Nov.	3.	State Journal Printing Co., account Nov. 1	1 50
	9.	Wisconsin Medical Journal, account Nov. 1	116 58
Dec.	16.	Wisconsin Medical Journal, account Dec. 1	74 84
1904.			
Jan.	4.	Dr. F. D. Bentley, refund	2 00
	8.	Wisconsin Medical Journal, account Dec. 31	96 00
	13.	S. S. Hall, expense	9 68
		Dr. G. V. Mears, expense	4 17
		Dr. J. S. Walbridge, expense	9 32
		Dr. W. T. Sarles, expense	10 65
		Dr. J. Meachem, expense	14 16
	29.	Tracy, Gibbs & Co., account Jan. 6	31 25
Feb.	1.	Wisconsin Medical Journal, account Jan. 27	96 75

Mch.	10.	Wisconsin Medical Journal, account February	98 92
	24.	American Medical Association, account March 16	2 00
April	13.	Wisconsin Medical Journal, account March 31	98 33
May	7.	Wisconsin Medical Journal, account April	106 67
	14.	Douglas County Society, refund	2 00
	20.	Winnebago County Society, refund	14 00
June	1.	Globe-Wernicke Co., account May 24	6 25
	4.	Wisconsin Medical Journal, account May	106 17
	13.	Western Passenger Association	17 00
	16.	Wisconsin Medical Journal, programs	8 50
		S. S. Hall, account exchange, postage, etc	39 15
		S. S. Hall, salary 1903-4	125 00
		Total	$2,243 75

Respectfully submitted, S. S. Hall, *Treasurer.*

June 23, 1904.

We, the undersigned Council, have carefully examined the annexed report of the Treasurer and find it correct.

(Signed) W. T. Sarles,
G. V. Mears,
J. S. Walbridge,
J. M. Dodd,
J. F. Pritchard.

Treasurer S. S. Hall: There is in the neighborhood of $500 due from members under the old organization — the yearly dues. There has been a good deal of misunderstanding in reorganizing the society, as to whether the old members should pay dues for 1903, or should not, and the Treasurer has had a large amount of correspondence on his hands in regard to matters of that kind. Some of these accounts may be collected. This is only counting dues that were back two years.

Of course, in speaking of our finances for the coming year, you must remember that the expenses of the councilors, with only one or two exceptions, have not yet been paid, and that very little money will come in until the first of April, 1905. Our Journal is costing us now a little more than $100 a month, so that we cannot say we have a surplus in the treasury to run the society for another year, but I think we will come out in pretty good shape.

President: The report will be referred to the Councilors for their action.

The secretary's report will be next in order.

The Secretary then read his report, as follows:

SECRETARY'S REPORT.

The Secretary begs leave to present the following report for the past year:

When, one year ago, the plan of organization recommended by the American Medical Association was unanimously adopted by this society, while it seemed to be a course of action which was necessary and inevitable, yet, to many such a radical change appeared hazardous, and one which might

impair the growth and usefulness of the organization. After a year's experience, while it is yet too early to state ultimate and positive results, there can be no question in the mind of a candid observer that, thus far, the plan has succeeded beyond our most sanguine expectations, and has already been of the greatest value to the profession of the state. Let us review, for a moment, the conditions which existed before this action was taken, and which were likely to continue for an indefinite period. By active and continuous effort the State Society had increased, in the last 20 years, from a body of about 300 members to one of a little over 700, and, in comparison with other similar organizations, was regarded as prosperous and successful. Yet, with all this growth, we could claim but little more than one-fourth of all the physicians of the state. Moreover, the membership was most unevenly distributed, being in large part drawn from territory within a radius of 75 or 100 miles from Madison. It was becoming, year by year, an increasingly serious problem how to secure and maintain the support of physicians in the Northern part of the state and in other remote localities. In our efforts to secure needed medical legislation, and accomplish other objects for the benefit of the people of the state, there was no unity of action, and it often happened that most effective opposition was found in our own ranks. As a direct result of this state of affairs, it was found necessary, when our present medical law was enacted, to make concessions which, to many, seemed almost fatal to the measure. As regards local medical societies, there have never been more than seven or eight County Societies, in various stages of animation, but none really flourishing. In addition there were and are still, five quite successful District Societies, all of which will probably become a part of the present plan of organization. In a single year all this has been changed. The State Society now numbers 1,300 members, nearly twice as many as a year ago, representing equally every part of the state. The spirit of unity and harmony in the profession is best illustrated by the resolution passed by the Homeopathic State Medical Society, recently, by which a committee was appointed to take into consideration the question of an "amalgamation with the Regular profession." In the 71 counties in the state there are now organized and chartered 62 County Medical Societies, embracing every county in the state. The feature of the plan which was most criticized, as being unjust and tyrannical, has proven itself to be the most useful and practical of all. In some quarters there was a remonstrance that it was not right to *force* a man to belong to his county society if he did not wish to, but this process of benevolent assimilation, in which a kindly and judicious pressure is brought to bear to make a man good, whether he wants to be or not, has worked out most admirably. When one has arrived at a realizing sense that a rejection of this fraternal proffer involves a sort of professional hari-kari, and he is left stranded and alone, he is apt to make up his mind to join the Heavenly throng and have his name inscribed in the book of the Redeemed. If the plan had no other virtue whatever, this magnificent showing of county medical societies throughout the length and breadth of the state would fully justify its adoption. The manifold benefits of this revival of the "Medical Society Spirit," and the bringing together of the physicians of all these counties for scientific work and fraternal fellowship, are evident to all, and too numerous to mention. You may call it, if you please, a medical "*Union*" or a medical "*Trust*." Nevertheless, it possesses all the advantages

and none of the defects which these terms suggest in industrial or business affairs. The *modus operandi* by which this work has been accomplished may be briefly reviewed:

THE PROVISIONAL COUNCIL.

At the last annual meeting the president appointed a committee of ten, one from each Congressional district (the 4th and 5th districts being united) to act as a Provisional Council, whose duty it should be to organize a medical society in every county in the state. The arduous and self-denying labors of this committee are known to you all. The progress of the work has been noted in the monthly issues of the JOURNAL, and its successful issue is manifest in the complete organization of the state. The work has not been easy, nor without its perplexities and discouragements. Apathy, indifference or open opposition had to be met and overcome. The methods and advantages of the plan had to be made clear by repeated explanations—personal differences among physicians adjusted, and the like, till, finally, the county organization was effected. The difficulties in some districts were, of course, greater than in others. The work of Councilors Dodd and Boothby, in the 10th and 11th districts, is to be especially commended, since in both districts are a large number of thinly settled counties, covering a large territory, whose organization necessitated long journeys and the loss of much valuable time.

THE COUNTY SOCIETIES.

Since the county society is the unit—the foundation—the support of the whole structure, it deserves, and shall secure, from this time forth, our constant services and our tenderest care. We are extremely gratified that we have been able to organize these 61 County Medical Societies in Wisconsin, but this is just the beginning of the work. These are lusty and promising infants which have been born—the children of the medical profession; but their growth and future will depend wholly upon the sort of care and support they shall receive. The most important officer in each county society, the one upon whom rests the chief burden of responsibility for its prosperity and usefulness, is the secretary. He should be selected for certain known qualities—devotion, activity, tact and good sense. Considering the unfavorable conditions necessarily connected with this first year of organization, the results are exceedingly good. Nearly all the secretaries are active and efficient. With more settled conditions and a greater knowledge of the plan, and the duties of the office, there will doubtless be constant improvement. The officers of the State Society, especially the councilors, must also bear their share of the burden in maintaining these organizations, it being one of the constitutional duties of each councilor to "visit the counties in his district at least once a year." One of the most trying features of the year's work has been the matter of the annual dues to the State Society. This has been due to several causes. First, it was necessary to consider both the old and the new members. Then the county societies have been organized at different times during the entire year, and we have also changed our fiscal year to correspond to the calendar year. All this has caused much confusion and a vast amount of labor which will be unnecessary hereafter. It has been found inexpedient to enter upon the membership roll any who have not already paid their dues to the State Society for the current year. Otherwise the books would soon be in inextricable confusion. Hence the rule has been

adopted to enroll only those whose dues accompanied the names, and the county secretaries will please bear this in mind. The accredited membership, therefore, 1,305, includes only those who paid the 1904 dues. There are perhaps 150 who joined the county societies and paid the 1903 dues, who are in arrears, as yet, for 1904—very many of whom will doubtless pay up and be reinstated in membership.

A word as to the effect of the movement upon our brethren of the Homeopathic and Eclectic Schools. All legal practitioners, in good standing, in these schools have been invited to apply for membership under our constitution. The response has been sufficiently cordial, especially in the smaller towns and among the younger men. Outside of Milwaukee there have been already received 44 Homeopaths and 30 Eclectics.

In some of the counties where societies were already organized, it has been found difficult to adjust the new plan to the conditions already existing. This was notably the case in Racine county, where a majority of the physicians prefer to remain in an organization of a purely business character. Time will convince them of their error.

DISTRICT SOCIETIES.

With the county societies organized, the time seems ripe for the organization of district societies throughout the entire state. Two have been already organized—with distinct boundaries—by Councilors Dodd and Boothby in the 10th and 11th districts. These district societies will add variety, increase interest, assist in maintaining the integrity of the county societies, and be a useful link in uniting them to the State Society. Inasmuch as the present Congressional districts are purely political—liable to frequent changes, and illy adapted for our purpose, it is suggested that the boundaries of these societies be determined by the railroad facilities and convenience of access, and that the councilor district be made to conform to the boundaries of the district societies. If this plan is adopted, a committee should be appointed by the House of Delegates to take this matter in charge or entrust it to the Council.

PUBLICATION.

At the last meeting of the society the publication of the annual volume of Transactions was suspended, and a contract made with the WISCONSIN MEDICAL JOURNAL to publish the Proceedings of the Society in the form of a monthly medical journal. After an experience of one year, there are few, if any, who would wish to return to the old plan. The WISCONSIN MEDICAL JOURNAL, under its efficient editor, Dr. Patek, has proven itself a clean, able, and most valuable medical publication. It contains, not only the proceedings of the state and various county societies, but a large amount of other important matter, and is fully worth the amount of the annual dues of the State Society. It goes each month to each of the 1,300 members of the society and cannot fail to prove a most efficient instrument in increasing and maintaining the membership.

In accordance with our constitution, an attempt has been made during the year to keep a card-index register of all the legal practitioners of the state, both for the state, and the county societies, as well. These card-indexes are supposed to contain a complete and correct directory of any legal

practitioner in the state, or county, up to date. Personal record blanks have been sent to all the county secretaries, and there have been returned to the state secretary 975 personal records to date. Many of the secretaries have been most faithful and painstaking. Others have failed to appreciate the importance of the undertaking. Now that the preliminary work is done, all are urged to prosecute this work with renewed energy. Blanks will be promptly forwarded when asked for.

DEATHS AND REMOVALS.

Removals: W. C. Bennett, Milwaukee to Oregon; F. M. Chapman, Sussex to Milwaukee; A. A. Dougherty, Muscoda to ————; H. B. Johnson, Hillsboro to ————; C. E. Lauder, Johnson Creek to Viroqua; W. H. Lewis, Eland Junction to Bernamwood; G. F. Hilton, Symco to Sturgeon Bay; M. W. Harrison, Tomahawk to Spokane, Wash.; B. E. Manchester, Armstrong Center to ————; T. Miller, Oconomowoc to Milwaukee; J. R. McDill, Milwaukee to Philippine Islands; B. E. McSham, Hales Corners to Milwaukee; M. O'Malley, Milwaukee to Watertown; J. H. Pfluegar, Platteville to Fairchild; E. H. Pomeroy, Lake Geneva to Highland Park, Ill.; H. Reineking, Sheboygan to Milwaukee; Thos. Schnetz, Husha to Milwaukee; F. W. Starr, Royalton to Stanley; W. H. Van Dusen, Montfort to Lancaster; W. E. Wray, Denmark to Minocqua; J. A. Jackson, Berlin to Randolph; C. G. Willson, Milwaukee to Shenandoah, Iowa; L. Juergens, Fredonia to Iowa; E. Schoenc, Pt. Washington to Chicago; C. A. Wells, Odanah to Oklahoma.

.. *Deaths*: A. F. Blocki, Sheboygan, March 6; Almon Clarke, Florida, May 1; L. De Chesne, Sturgeon Bay; B. F. Dodson, Berlin; J. M. Evans, Evansville, Aug. 23; N. N. Glim, Ashland, Jan. 15, 1904; S. C. Johnson, Hudson, Oct. 17; G. P. Kaemmerling, Port Washington, Oct. 3; L. B. La Count, Merrill, May 20, 1903; H. A. McWain, Poysippi; J. C. Noyes, Oshkosh, June 7; Jno. Phillips, Stevens Point, July 27; S. S. Willis, Appleton.

The following are the statistics of the 61 county societies. The reports of the non-members are wanting in the case of some counties, and imperfect in others, so that the total number of members and non-members reported, *viz.*, 1287+842=2129—is 478 less than the toal number in the last edition of Polk, which is 2607.

	Members	Non-Members	Members State Soc.	Records		Members	Non-Members	Members State Soc.	Records
Ashland	15	5	4	13	Forest-Florence	4	7	1	0
Barron-Gates-Polk	25	22	2	22	Fond du Lac	43	20	16	46
Bayfield	5	6	1	5	Eau Claire	16	19	5	0
Brown	22	12	5	17	Dunn	15	8	2	13
Buffalo-Pepin	12	0	2	11	Douglas	31	6	8	39
Calumet	6	7	2	1	Dodge	22	23	12	3
Chippewa	14	8	3	16	Door	7	5	0	0
Clark	11	19	4	17	Dane	70	26	38	36
Columbia	25	11	8	0	Crawford	10	5	2	8

	Members	Non Members	Members State Sec.	Records		Members	Non Members	Members State Sec	Records
Grant	42	11	12	42	Portage	16	7	4	15
Green L-Waushara	25	3	10	25	Price	10	1	4	10
Green	27	9	8	24	Racine	14	23	8	24
Iowa	19	5	3	22	Richland	16	8	2	2
Iron	6	1	1	6	Rock	29	5	15	25
Jefferson	15	15	7	29	St. Croix	14	6	5	24
Juneau	13	10	4	13	Sauk	14	16	0	22
Kenosha	10	17	8	4	Shawano	15	8	2	0
Kewaunee	6	8	1	1	Sheboygan	18	26	11	12
La Fayette	21	1	3	23	Taylor	6	3	2	9
La Crosse	25	18	15	25	Trempealeau-				
Langlade	7	2	3	6	Jackson	14	5	5	13
Lincoln	18	1	5	19	Vernon	14	11	5	6
Manitowoc	21	15	10	25	Vilas	5	3	2	5
Marathon	20	4	6	22	Walworth	19	21	12	17
Marinette	11	12	3	0	Washburn-Sawyer-				
Marquette	8	3	2	0	Burnett	9	3	1	11
Milwaukee	241	389	163	14	Washington	14	8	7	19
Monroe	20	3	6	25	Waukesha	38	26	23	25
Oconto	7	6	1	3	Waupaca	22	14	5	24
Oneida	10	5	3	11	Winnebago	38	36	19	41
Outagamie	29	23	14	34	Wood	16	6	4	27
Ozaukee	10	4	3	7					
Pierce	16	...	0	16	Totals	1305	842	540	975

In conclusion it may be said that, while our new constitution is, in a way, still on trial, we have every reason for encouragement, and a belief in the possibilities of the plan in general. At the same time, we are at liberty to modify or change in any way we please if thought best.

In behalf of the officers of the society, thanking all who have labored so faithfully in its interests the past year, this report is respectfully submitted.

CHARLES S. SHELDON, *Secretary.*

SECRETARY: I have had large quantities of correspondence in connection with the business of the society.

DR. PRITCHARD: I move that this correspondence be referred to the Council, and what is of interest to the House of Delegates be reported by the Council to the House of Delegates.

DR. W. T. SARLES: I move as an amendment that the chair appoint a committee of 5 for this body of delegates to whom to refer this matter. The Councilors must hold special meetings and they have much work to do. This work can be done by the business committee as suggested, and that will help us out.

PRESIDENT: The question is on Dr. Sarles' amendment, that a business committee be appointed from the House of Delegates to which to refer all new business.

Motion carried.

Secretary's report referred to council.

PRESIDENT: The business committee of the House of Delegates to which will be referred these communications will be Dr. Wingate, Dr. Ritchie, Dr. Pelton, Dr. Sears, and Dr. Evans.

PRESIDENT: The next order of business will be to elect two delegates to the American Medical Association for two years.

DR. SARLES: I suggest that those ought to be elected as delegates who will take the trip and be there. It is very important that at least two of these delegates be present at the meeting, and I would nominate Dr. Bennett, of Beloit—he expects to go.

DR. EVANS: A man becomes valuable according to the length of time he has served there, and inasmuch as Dr. Sarles has been there year after year, I would like to nominate Dr. Sarles.

SECRETARY: I would mention the fact that we have heretofore elected no alternates, and that the alternates should be elected at this meeting.

Dr. John Walbridge, of Berlin. was nominated by Dr. Hitz.

Dr. C. S. Sheldon was nominated as a delegate.

PRESIDENT: I will appoint Dr. Hitz and Dr. Gray as tellers.

Dr. J. M. Dodd, of Ashland, was nominated by Dr. Sarles.

DR. EVANS: I move that the two receiving the highest number of votes be delegates and the next be considered alternates.

Motion carried.

SECRETARY: The vote upon delegates to the American Medical Association has resulted as follows:

Drs. Sarles and Bennett are elected as the delegates. Dr. Walbridge is Dr. Evans' alternate, and Drs. Sheldon and Dodd respectively the alternates of Drs. Sarles and Bennett.

PRESIDENT: The Business Committee will meet in this room tomorrow morning at 10 o'clock. The next order of business is the election of the committee on scientific work, that is, three members of the society.

DR. PRITCHARD moved that the president and secretary select that committee.

PRESIDENT: The motion of Dr. Pritchard that the president and secretary appoint the two members to serve on the scientific committee with the secretary is now in order.

Motion carried.

PRESIDENT: I think that had better mean the incoming president and the secretary, because it is under his administration that this committee will work, and he will want a committee that will work in harmony with him.

DR. SARLES: There was a sort of understanding that you were going to serve another year. We cannot elect any president or vice-president out of this body, but the workings of the American Medical Association have been very much benefited by having a man elected at this time, but he does not take his seat until the next year, and then he has a chance to get acquainted with the work, and that gives

you a chance to appoint this committee to do this work, as the old president. The man who is elected now in the east does not take his seat until a year from now. Dr. Musser took his chair for the first time in the House of Delegates in Atlantic City after Dr. Billings had done the introductory work. That gives one year for the president to get acquainted with the work. In doing that some man has to hold for two years.

DR. PRITCHARD: We will need an amendment to our constitution. We cannot do that at all at present—and my motion was for the present presiding officer to make this appointment.

DR. SARLES: You are acquainted with this work and the work that has been done, and you are better able to help on that committee than a new man would be. Then let the next man do the same thing preceding the other elected officer.

PRESIDENT: The next matter is the election of a committee of three on public policy and legislation. That is our regular legislative committee that before the reorganization was an appointive committee. Now it is to be elected by ballot.

DR. HITZ: Will you state who are on that committee at the present time.

SECRETARY: I will state that none was appointed last year, because we were under a new plan of working.

DR. SARLES: There was a committee of five appointed two years ago, but none of them were provided for last year.

PRESIDENT: It is in order to elect three members to serve on the committee with the president and secretary.

DR. PRITCHARD: Would it not be wise to take the committee from the State Board of Medical Examiners? They know pretty well what legislation is necessary, and it would seem as if it would be perfectly proper to select those members from that state board. I know Dr. Currens would like to have it done.

DR. SARLES: I suggest that you take one of the members of the State Board of Medical Examiners, and one of those members who have had experience on that board.

I will nominate Dr. Hitz as one member of that board.

Dr. U. O. B. Wingate was nominated.

DR. HITZ: It would seem to me advisable to take one member from the Board of State Medical Examiners, one member from the Board of Health, and perhaps one member not connected with either. It seems to me you will then arrive at better results than otherwise. I should like to request that my name be withdrawn. I am not in line for that work at present.

Dr. J. R. Currens was nominated.

DR. HITZ: I would like to nominate Dr. Seaman as one member of that committee. He has had a great deal of experience in legislative matters.

DR. SEAMAN: I spent about two or three years of my life at Madison, and I do not want to go out there any more, and as a

matter of fact, unless they move the legislature into Milwaukee, I shall have to decline.

Motion made that nominations be closed and that the secretary be instructed to cast the ballot of the association for Drs. U. O. B. Wingate, G. E. Seaman and J. R. Currens, as members of the committee on public policy and legislation.

Motion unanimously carried and ballot so cast, and Drs. Wingate, Seaman and Currens declared duly elected members of the committee on public policy and legislation.

PRESIDENT: The next order of business is the election of councilors.

DR. PRITCHARD: Before the election of councilors is had, I would state that when we were laboring on this constitution and by-laws we took up the question of having the councilor districts rather on railroad lines, not following the congressional districts at all, but last year, in order to expedite matters, congressional districts were adopted and councilors were appointed from those districts. Now it would seem that this question ought to be thoroughly investigated before the councilors are elected. Congressional districts are not convenient in many cases, and I think that the question ought to be referred to a committee before such an election is had, and get the councilor districts in some form in which they will be convenient. Take for instance the lake shore: We have a string of counties that could be easily reached by one man with little trouble, and next a tier of counties back of that, etc., and in that way it would seem that we could get our councilor districts in some form in which the councilors would, without inconvenieneing themselves very much, or spending all their time, cover the districts and meet with these different county societies, and I would make a motion that before the councilors are elected these districts be changed.

DR. EVANS: Would it not be possible—after the election of the councilors—for them to redistrict the state?

DR. PRITCHARD: I do not see how they can.

PRESIDENT: Would you not extend that motion a little and have it include the appointment of a committee?

DR. PRITCHARD: I intended to have it referred to a committee, so that the matter could be thoroughly investigated before the councilors are appointed. It does not seem to me it ought to take much time. When we were laboring on the question Dr. Mears took that matter up and went over it pretty thoroughly, and we had those lines pretty well established, but it was thought best last year to appoint councilors simply from congressional districts, and of course, as Dr. Boothby has said, it entailed an immense amount of work in those districts, and while we have no objections if they choose to still continue those districts as they are, yet the southern part of the state could in many instances be reached very much

better by not following congressional lines at all, and as suggested, those congressional lines are liable to change at any time.

Dr. Sarles: I think the old councilors as a committee could redistrict the state as well as anybody, and after it is redistricted, let it come before this body to be accepted and then elect men from each of those districts.

I should suggest as that committee the old councilors to report to this body and then elect new councilors for those districts afterwards.

President: The motion is that the redistricting of the state be referred to the council for report to the delegates on the morning of Thursday.

Motion carried.

President: The next order of business is the election of a committee on nominations, that will be ten men, to report on Friday morning.

Dr. Hitz: Is it necessary to elect a committee on nominations from the new councilor districts?

President: I think not. I think the present division of the state into councilor districts would be all right for the nomination of this committee.

Motion made that the president and secretary appoint that committee. Carried.

President: The next subject will be miscellaneous business.

Dr. Sarles: I will file it in form, but I believe that we will want to use the methods adopted this year by the parent body, and that is, that all nominations be made by ballot without any nominations on the floor, in place of committees. That is the provision of their new constitution, and we can adopt it, and those getting the highest number are the candidates to be balloted upon for election. I think you will like that method better than the present, and we have a right to accept it by letting it lie over one year.

Dr. H. J. Stalker: We have within the last few days lost a very eminent member of the medical profession, Dr. N. S. Davis of Chicago, and whether the House of Delegates should take action on it I do not know. I would suggest, however, that action be taken.

Dr. Pritchard: I think that properly will come before the general meeting of the society. The House of Delegates is a legislative body. The probabilities are that all the members would like to act upon it, and I think it had better be referred to the convention.

Dr. Evans: I believe this is the largest meeting the House of Delegates will have, and I think it is well this evening to dispose of all the business we can, and amongst that business, about the most important thing is the place of meeting for next year, and I would like to suggest that that be disposed of this evening, and I move that we decide tonight where we meet next year.

Motion carried.

Dr. Evans: I extend an invitation to you to come to La Crosse. At the second last meeting of the La Crosse County Medical Society it was decided by a unanimous vote to extend a cordial invitation. I suppose the time will come when we will want permanent quarters in Milwaukee, but before that is decided definitely I think we should go about some. Heretofore it has been impossible to invite the members of the State Medical Society to La Crosse. Now we are in position not only to invite you, but to properly entertain you when you come there, and not only the La Crosse Medical Society asks you to come, but I have an invitation here from 600 members of the La Crosse Progressive Association who send you hearty greeting and extend you a cordial invitation to meet in La Crosse next year. I have also an invitation from the La Crosse Board of Trade.

I would like to say to the members of the House of Delegates that La Crosse has got a move on herself of late, and if you come up there I can assure you a good time. We have to-day one of the most beautiful parks in the northwest, an island across the river, on which over $100,000 has been expended, and where we might have an open air session. One of the ideas of the Progressive Association is to charter a large steamer, and that the society shall hold one of its scientific sessions on the Mississippi River. We do not wish to interfere with the scientific work of the association, but between sessions we hope to be able to give you a good time. I am sure we can do it. We are right on the border of Minnesota, and within four hours' ride of Minneapolis and St. Paul, and within an hour's ride of Winona, and we can have a large delegation I am sure from the state of Minnesota, if you will only come up to La Crosse next year.

The letters of invitation which have been sent to you I will present. They are as follows:

La Crosse, La Crosse Co., Wis., June 20, 1904.

To the Wisconsin State Medical Association, Milwaukee, Wis.

Gentlemen: The six hundred members of the La Crosse Progressive Association send you their hearty greetings, at the same time we wish to extend to you a cordial invitation to meet in La Crosse next year; you can rest assured if you do come we will be on hand to give you all a good time, so you will always have occasion to look back to your visit to La Crosse with a great deal of pleasure. La Crosse is the coming city and it is to your interest to come and have a look. We have proper railroad facilities, plenty of hall room and hotel accommodations. Hoping that La Crosse will be selected as your next meeting place, we remain, Yours truly.

The La Crosse Progressive Association.
W. B. Tscharner, *President.*

La Crosse, Wis., June 20, 1904.

Dr. Edward Evans, City.

My Dear Sir: Permit me to call your attention to a resolution passed unanimously at the last meeting of the Board of Trade, extending a cordial invitation to the Wisconsin Medical Society to hold its next annual meeting

at La Crosse, and to ask if you will not kindly extend this invitation to the society on behalf of the Board.

We shall appreciate your kindness in this matter very much, and beg to assure you that if the invitation is accepted the people of La Crosse will do everything in their power to make the society's next annual meeting one of the most satisfactory in its history. Very sincerely yours,

ROLAND B. GELATT,
President La Crosse Board of Trade.....

DR. SARLES: I desire to second the proposition of the La Crosse people. I know it is quite a step from Milwaukee to river water, but you fellows have a whole year in which to get over it. Now, this proposition of La Crosse has been before our society at different times, and one reason why she has not pressed her claims was on account of her hotel facilities; but they have built a $200,000 hotel there and are in good shape, and there are a good many men in western Wisconsin who do not get to Milwaukee. Northern Wisconsin gets down to Chicago more than the middle west. There is no place you can get to as easily as Milwaukee from all parts of the state, but we have made a practice of getting out somewhere else once in three or four years, and it is the same principle that the national body exercises when it goes way across the continent. They can get more members at Chicago than anywhere else in the United States, but for some reasons they go clear to the extreme coast, and then into the central part of the country, and I think we owe it to the profession on the west side of the state to go to La Crosse, to make that the meeting place in the near future. I second the nomination that we meet there next year.

Motion was unanimously carried and La Crosse fixed upon as next place of meeting.

Adjournment was here taken until 8 o'clock A. M. Thursday, July 23, 1904, at the Athenaeum.

Athenaeum, Milwaukee, Thursday, June 23, 1904, 8 a. m.

House of Delegates called to order by president.

Roll call by secretary.

The president announced that, there being a quorum present, the House was ready for business.

PRESIDENT: The first order of business is the reading of the minutes of the last meeting.

The reading of the minutes of the last session followed.

DR. PRITCHARD (in chair): We will hear the report of the Business Committee.

DR. WINGATE: The Business Committee met, and, three out of five being present, we considered the communications referred to us. Dr. Sears was elected secretary and has a full report, which he will submit as to the action taken.

Dr. Sears: After examining the communications the Business Committee would report as follows:

1. Resolution of Lincoln County Medical Society in regard to advertisements of traveling doctors, recommended, placed on file.

2. Recommendation of Cressy L. Wilbur relating to promotion of uniform registration laws, referred to Committee on Legislation and Public Policy.

3. Request of Dr. W. W. Keen in regard to a memorial fund for the late Dr. Walter Reed, U. S. A., referred to the general society for action.

4. Resolution of New Jersey Pharmaceutical Association relating to excessive charges on imported pharmaceuticals, referred to Committee on Legislation and Public Policy.

5. Resolution of the Mississippi Valley Medical Association in regard to the prevention of tetanus, recommended, referred to the editor of the Journal and the Committee on Legislation and Public Policy.

6. Communication of Dr. Frank Allport in regard to defects of eye, ear, nose and throat of school children, referred to State Board of Health.

7. Communication of Mississippi Valley Medical Association relative to delegates, referred back to the House of Delegates for action.

H. B. Sears, *Secretary.*

Dr. Sarles: I move the adoption of the committee's report.

Seconded and carried.

Dr. Evans: I would like to suggest to the secretary—in transmitting the report of this committee to the State Board of Health in regard to Dr. Allport's matter—that he be instructed to urge on the State Board of Health the great desirability of their taking some action in regard to this matter. If the Board of Health feel that the House of Delegates is interested in it they will perhaps take a little more active interest in it themselves.

President: What is the request?

Dr. Evans: Dr. Allport is very much interested in the eyes of school children. He feels there are very many defective children not being looked after, and he wants to get public interest aroused in the matter.

President (Pritchard): We have adopted a system of examining eyes, and it is a very simple matter, and I think the State Board would be very wise in making the suggestion if they cannot do any more—that is—that test cards be furnished and from the examination made by a physician directly and where the eyes are found to be defective, a note sent to the parent suggesting or recommending that before the child come to school the eyes be properly attended to by a competent physician. It is a very simple matter.

Dr. Wingate: The State Board of Health already has this matter under consideration and has a committee at work on it, together with the superintendent of public instruction at Madison, in order to reach all the schools of the state, and that committee will report at a meeting of the board to be held today. I presume they have the matter all worked out by this time.

Secretary: The matter of the publication of our transactions

ought properly to come before us. I have received the following communication:

MILWAUKEE, June 22, 1904.

To the Honorable Board of Delegates, State Medical Society of Wisconsin.

GENTLEMEN: We take this opportunity of informing you that should it meet your approval, The Wisconsin Medical Journal Company stands ready to renew its contract with the Society to print its transactions in its publication. Our relations with the State Medical Society during the past year have been very pleasant, and from what we have been able to determine from various expressions of many different members, we are led to believe that the Journal has given general satisfaction.

Hoping that our proposition may receive your favorable consideration, we are, Very respectfully yours,

THE WISCONSIN MEDICAL JOURNAL CO.,
M. M. TAYLOR, *Secretary.*

PRESIDENT: The expense of this journal is paid by the society, and by motion we can dispose of this in a moment.

DR. SARLES: Is the length of time given?

SECRETARY: One year.

DR. SARLES: I move that we enter into the same contract relative to the journal as the year previous.

Motion carried.

PRESIDENT: The next is report of council on redistricting the state.

SECRETARY: I will read the report by councilor districts:

First District—Dodge, Washington, Jefferson and Waukesha.

Second District—Racine, Walworth and Kenosha.

Third District—Dane, Green, Rock, Sauk and Columbia.

Fourth District—Vernon, Crawford, Richland, Grant, Iowa and Lafayette.

Fifth District—Manitowoc, Calumet, Sheboygan, Fond du Lac.

Sixth District—Waupaca, Outagamie, Winnebago, Waushara, Green Lake and Marquette.

Seventh District—Buffalo, Trempealeau, Jackson, La Crosse, Monroe, Juneau, Adams.

Eighth District—Forest, Florence, Marinette, Oconto, Shawano, Door, Kewaunee and Brown.

Ninth District—Taylor, Lincoln, Langlade, Portage, Clark, Wood, Marathon.

Tenth District—Polk, Barron, Gates, St. Croix, Dunn, Chippewa, Pierce, Pepin, Eau Claire.

Eleventh District—Douglas, Bayfield, Ashland, Iron, Price, Sawyer, Washburn, Burnett, Oneida, Vilas.

Twelfth District—Milwaukee and Ozaukee.

DR. B. C. BRETT, of Green Bay: In regard to the Eighth, the railroad facilities do not warrant the change suggested by the committee. We have already the Fox River Valley Medical Society, which has met ten years or more, all along the Fox River Valley,

and it seems to me it would be very poor policy to rupture that society.

Dr. Pritchard: The difficulty is we have these strong counties and we want them for centers. Of course this is not a cut and dried affair, and we want suggestions now as to any changes that might be made; but changes can be made at any time that we find that these districts are not arranged in the best possible manner. They can be changed now, any of them, if desired. But, so far as Brown, Outagamie, Winnebago and those counties are concerned, they are all strong counties as far as the number of physicians are concerned, and we want to get in the little fellows from outside who do not pay much attention to medical societies.

Secretary: What kind of a district would Dr. Brett suggest?

Dr. Brett: I have not given it consideration, but it occurs to me that the members of the Fox River Valley Medical Society would be very loath to cut up their district and distribute those cities into other districts. Here we have the whole length of the Chicago & Northwestern Railroad, from Menominee and further north than Menominee, down to Fond du Lac included, and it widens out to Kewaunee and Door and to Shawano counties, up along the Green Bay & Western road as far as New London, and we have had a very pleasant society. Dr. Steele is present and he ought to give us some information in regard to that society, as he is one of the fathers of it, as well as myself, and it seems to me it would be like a divorce proceeding to repudiate that society now, and I am very loath to accept that classification.

Dr. Sarles: Relative to the division of the Fox River Valley Society, the Central Wisconsin Society is one of the oldest societies in the state, and we have to divide that also in our new plan of reorganization. It puts us out of the old Central Wisconsin Society, which has been our standard for years.

I want to make one amendment, that Adams and Vernon counties be put in the Seventh District for convenience.

Dr. E. L. Boothby, of Hammond: Let me disabuse you of the idea that seems to be present that we have got to have a district society in the councilor district and cannot go out of it. The councilor districts are made primarily for the convenience of the councilors in getting over the district. I do not think it is necessary, and I would not approve of breaking up any district society now existing if it is successful, even if it does run into some other district, or embraces a number of districts. When it is more convenient to meet with some other society than your own, go there; there is no objection to it. I would not be arbitrary about that at all. The thing is fixed fairly well for the convenience of the councilors in getting around and visiting these different county societies, and I would advise that, as far as practical, you make your district societies conform to your councilor districts; but if it is impracticable, do not do it. Do not be arbitrary about this thing at all. I think there will be no difficulty in the matter.

Dr. Brett: With that view I entirely concur in the report. I thought it was meant to be obligatory that we should have district societies composed of these various county societies as named in this report. If it is not contemplated that the old societies shall be broken up and new ones formed according to this geographical outline, I am perfectly contented with it.

Dr. J. S. Walbridge, of Berlin: As far as Adams county is concerned, it is just as inaccessible from the Sixth District as it can be from any other, and with Dr. Boothby I do not see the necessity of disrupting any of the district societies. I do not see why they cannot go over the line just as well. This division is for the convenience of the councilors, and if we keep changing it we will get into confusion, and, therefore, I move that the report be adopted as presented.

Dr. Sarles: It is absolutely necessary to put Vernon into the Seventh. I do not care where you put Adams, there is only one man there and we cannot find him, and I make the amendment that Vernon be put in the Seventh.

Dr. Walbridge: I accept that amendment and I move that the report be adopted as read with the change suggested by Dr. Sarles.

Motion seconded.

Dr. A. R. Wettman, of Lincoln: Some minor changes might be desired in this matter. Some of the members are not present and they might prefer to be in other districts. Why not leave it to the committee to redistrict the state after having heard from all these different members?

Dr. Sarles: I second the motion and I suggest that the motion be carried and that it be left to the judgment of the councilors to make any changes hereafter that they may desire.

Secretary: In regard to the matter of district societies, section 11, chapter 4, of the Constitution, I think, covers the ground. It seems to me that the district society principle is very important and is an essential part of our organization. I would also refer you to article 7, page 3. These articles show the intent and purpose of the Constitution, which was framed by some pretty wise men who thought out this problem very carefully for a number of years. The idea of the district society is this: Here we are with 71 counties, with 62 organizations; some of them have a small membership. Dr. Smith's county society, the Forest-Florence, for example, has but four members. Once or twice a year these small county societies would like to touch elbows with their fellow practitioners in other counties. It tends to keep up the morale and discipline of the county society to feel that once or twice a year they are to become a part of a larger society. It not only would add interest, but it seems to me that the district societies would prove a very important and useful connecting link between the county societies and the state society. I think that we should have it as our ideal to ultimately have a district society in every councilor district, and that the intent

of the Constitution should be carried out, namely, that the presidents of these district societies should be vice-presidents of the state society, just as it is intimated that the presidents of our state societies shall be vice-presidents of the American Medical Association. I think that a consistent plan of that sort carried out will work better for our organization than the one which has been suggested.

Dr. Dodd: It seems to me that that article read by the secretary covers the matter completely, and that has been my contention from the first, that we must have a district society composed of the counties comprising each district. The object primarily of the office of councilor is that he is to be a sort of a superintendent of the work in his district. If you go to splitting up the districts and making societies overlapping, you will interfere to some extent with the jurisdiction of the councilors and make more or less confusion and tend to defeat this plan of systematic work which is contemplated in this plan of reorganization. It is a sort of military arrangement of the different divisions under the direction of the councilor; each councilor is responsible to a certain extent for the division under his supervision. So it seems to me that all those older societies already in existence should be willing to disband and unite into these councilor district societies. It might be unpleasant to do it, and if so, I suppose there would not be any objection to their retaining their old society—for instance, the Fox River Valley Society might exist as an additional society. I would not see any objection to their having their society and having their meetings just the same.

Dr. Boothby: There is one district society organized exactly on this line, and it embraces to-day the entire territory of the new Tenth District. It is organized on that plan. I could not see any other way of making a district there than just as it has been suggested by the committee. The Tenth District comprises every county that the West Wisconsin District Society comprises, that is, every county in what will now be the new Tenth District, and follows the railroad lines, making it convenient to cover, and carries out the constitutional idea of district societies.

Dr. Walbridge's motion to adopt the report of the councilors, excepting that Vernon county is put in the Seventh District, was then carried.

Dr. Sarles: I move that the councilors be given the authority to make any changes that in their judgment they may deem best for the benefit of the various county societies.

Motion carried.

The Committee on Scientific Work was then announced, consisting of Dr. W. H. Washburn of Milwaukee, Dr. Edward Evans of La Crosse, and the secretary.

Dr. Sarles: I want to refer to a matter presented by Dr. Joseph Bryant at the A. M. A. meeting regarding the national incorporation of the American Medical Association. This paper is simply to be signed by the members of the House of Delegates of

this society and sent to Dr. Joseph Bryant, to be used in the attempt to secure the speedy enactment of the bill proposed. It is as follows:

Gentlemen of the Judiciary Committees of the Senate and House of Representatives of the United States of America:

We, the undersigned, members of the medical profession throughout the United States, most respectfully request the speedy enactment of the annexed proposed bill incorporating the American Medical Association.

The proposed charter declares the purposes of the Association. It is non-political, and has for its main object the promotion of medical science, which can best be accomplished by unity of purpose and action. Such Association will bring together annually the best and most accomplished medical men of the nation, and prove, we believe, beneficial to all the citizens of our country.

I will also ask that the question as to whether we shall meet in the spring or fall be referred to the business committee.

So referred.

President Walbridge in chair.

Dr. Edward Evans: I would like to offer this resolution to the House of Delegates. All the contiguous states are going on record in regard to the tuberculosis question, and I would like to move the adoption of the resolution, which is entirely non-committal, but puts us on record as being in hearty accord with the scientific movement:

Whereas, There has been appointed by the state executive, a committee known as the Wisconsin State Tuberculosis Committee, and,

Whereas, We are in hearty accord with any movement whose aim is to eradicate this scourge, be it

Resolved, That this society respectfully urge the desirability of the executive and legislative bodies of our state giving all the moral and material support necessary for the efficient carrying out of the objects aimed at by this committee.

We do not necessarily endorse this committee, but endorse the aims of the committee, and ask the legislative and executive bodies to do everything possible to forward this work. I think we ought to go on record, and that is all we are doing. I do not think it needs any discussion.

Motion made that the resolution be referred to the general session. Carried.

Adjourned to 8 A. M., Friday, June 24th, 1904.

Friday, June 24th, 8:15 a. m.

House of Delegates called to order at the Athenaeum by the president.

The secretary called the roll and the president announced that there was a quorum present.

The secretary then read the minutes of the previous meeting.

SECRETARY: From the committees appointed to report I have received two communications, one of them being in regard to changing the time of the state meeting. The Business Committee would suggest postponement of consideration for at least one year.

Also a similar postponement of action regarding the association of states is recommended by the committee.

A motion was carried adopting the report.

The following resolution presented by the Lincoln County Medical Society was placed on file:

MERRILL, Wis., June 10, 1894.

We, the undersigned, members of Lincoln County Medical Association, do respectfully submit to your honorable body, the Wisconsin State Medical Society, for careful consideration and appropriate action, the following resolution:

WHEREAS, It is customary for the press throughout the state to accept the advertisements of traveling quacks and charlatans, giving such prominence to their matter as practically to endorse the claims of these disreputable physicians—which seeming approbation on the part of the local papers is often the cause of working great injury to the sick and afflicted, who are often influenced by these specious methods to consult this class of physicians instead of greatly more competent doctors in their own locality; and

WHEREAS, The same objection can be offered in regard to the advertising of patent medicines; be it,

Resolved, That the president of this society appoint a committee to draft appropriate resolutions for the consideration and adoption by this society and the various societies throughout the state, to the end that an united effort be made to correct this public wrong.

Respectfully submitted,

DR. L. B. COLLIER,
DR. W. H. MONROE,
Committee.

The Committee on Nominations presented the following report:

There were present at this meeting Drs. Simpson, Washburn, Sears, Evans, Pelton, Hosmer and Hayes. Dr. Evans was elected chairman and Dr. Sears secretary. They beg leave to respectfully report the following nominations as officers of the State Medical Society for the coming year:

President—C. W. Oviatt, of Oshkosh.

First Vice-President—J. A. L. Bradfield, of La Crosse.

Second Vice-President—Gilbert E. Seaman, of Milwaukee.

Third Vice-President—A. D. Rosenberry, of Wausau.

Nominations for councilors were made as follows:

These councilors are to be nominated and elected two each year, so that our first year would involve a difference in term of service, of course, for each pair of two.

First District—Dr. H. B. Sears, of Beaver Dam.

Second District—Dr. John Meachem, of Racine, for one year.

Third District—Dr. J. T. Nye, of Beloit.

Fourth District—Dr. E. S. Hooper, of Darlington, for two years.

Fifth District—Dr. J. F. Pritchard, of Manitowoc.

Sixth District—Dr. John S. Walbridge, of Berlin, for three years.
Seventh District—Dr. W. T. Sarles, of Sparta.
Eighth District—Dr. J. T. Redelings, of Marinette, for four years.
Ninth District—Dr. A. B. Sauerhering, of Wausau.
Tenth District—Dr. E. L. Boothby, of Hammond, for five years.
Eleventh District—Dr. J. M. Dodd, of Ashland.
Twelfth District—Dr. A. T. Holbrook, of Milwaukee, for six years.

Dr. Sarles: I move that the report of the Nomination Committee be accepted and adopted and that the officers named by them be made the officers of this association, and that the officers be elected by a vote of the secretary.

Motion seconded and carried, and so done, and the nominees declared by the president duly elected.

Dr. Washburn: I would like to inquire whose business it is to consider the propriety of the convention meeting in sections next year.

President: The House of Delegates.

Dr. Sarles: I move that the Committee on Scientific Work, together with the secretary and president-elect, be made a committee to report at the next annual meeting on the feasibility of section work in this society.

I think that they will be able to make a pretty intelligent report by that time, and we can adopt it next year if we think best. I think the time has come—I know in my annual address I recommended it at that time, four years ago, that we ought very soon to adopt these two divisions of work, so that men who do not care to sit under one paper can go and hear another of more interest to them. We are getting to be so large a body that it is impossible to entertain a society scientifically with just one series of papers read at a time.

Secretary: I would like to ask Dr. Evans whether the accommodations at La Crosse would permit of two sections—that is, two suitable places of meeting.

Dr. Evans: I think that could be very easily arranged.

Dr. Sarles: Then I will change my resolution. I will make a motion that we name the Committee on Scientific Work together with the president and secretary, to so arrange the next annual programme that it may be worked in two sections as far as thought desirable. Then, if we find it convenient, let us adopt it. This programme committee has a right so to do if we delegate the power.

Dr. H. B. Hitz: As chairman of the Program Committee I came down this morning with a view of speaking on this subject myself. During the past year we limited the number of papers to a comparatively small number, 22 in all, or 25 with the addresses. It was really limited to 20, but two extra papers came in at the end and we accepted them. Now, with this small number of papers we are crowded, even though several have been read by title, to get along with the program. It is impossible to place more than 25 on the program and give the requisite amount of time to the reading of

papers and their discussion, and I am strongly in favor of this move to divide the meeting into sections. As a matter of fact, this time, most of our papers were volunteer papers, in consequence of which we got comparatively few of a certain class. Now, for example, surgical papers are always easy to get; so also, as a rule, are special papers; medical papers, on the contrary, under this method, are difficult to obtain, except by invitation.

I believe that the program, even in this way, should be limited to a small number of papers on special subjects and a small number on general subjects. In doing this we will have plenty of discussion, about which I think the principal value of the papers centers. I therefore heartily endorse this movement to divide the meeting into sections; and I would furthermore suggest to the Program Committee that it limit to a small number the papers from volunteer contributors. The reason that I make this suggestion is, that while in Milwaukee we have many men who are writing a good deal and are willing to come forward, the men out in the state are perhaps not doing as much, and they do not feel like entering what seems to be a competition.

In order to avoid making the program largely sectional or local, I suggest that the number of volunteer papers be limited to a small number, and that the rest be by direct invitation of the Program Committee.

Dr. H. B. Sears: It seems to me we are rather precipitate in voting upon this matter now. I, for one, should oppose the idea, as I do not believe it will enhance the best interests of the society. Our reasons for having two sections can be no better than those which might be offered asking for three or more. The state society is a general practitioners' society in a most emphatic sense. It can continue to be a success and a practitioners' society, in my opinion, only so long as it fosters that which will satisfy the needs of and solicits the interest of the doctor in general practice. The responsibility of the general practitioner is greater to-day than ever before, and it seems to me that it is the most important duty of the state society to make every effort to lighten the burden of responsibility by offering a program at each annual meeting which will most conserve the needs of and tend most fully to enlighten and broaden intellectually the man in general practice. With more than one section this cannot be done. When specialists wish to confer, a very short session will satisfy their needs; but the ordinary doctor must have a generous and varied diet if he is to successfully cope with the morbidity which confronts him. He should have the privilege of hearing papers and discussions which will enlighten him and make clear to his mind *how far* and *when* he may care for the patient himself, and when duty demands that he should ask the aid and counsel of the specialist.

Dr. W. H. Washburn: When I was chairman of the Program Committee, as far back as 1895, it was found that it was easy enough to secure papers sufficient to consume the entire time of the meeting,

and I believe that 15 papers are all that can be properly presented and discussed, in any one section; and I believe that at the present time, with twice as many members as we had at that time, and certainly there will be three times as many next year, the time has come when the division must be made absolutely. I think that this motion can very properly be carried.

The general feeling is that the two sections should be numbered one and two, and that the surgical, medical and special papers should be distributed equally between those sections, so that a member can attend one section throughout and hear papers on all subjects rather than being compelled to go from section to section for the purpose. I think if this arrangement is made we can probably limit the number of papers to 15 in each section, and by undertaking work immediately that first-class papers and first-class discussions can be secured. I believe, moreover, that the number of annual addresses should be increased, that we should have besides a medical address and a surgical address, an address on state medicine. I should like very much to see this motion carried at this time.

Dr. L. F. Bennett: As to Dr. Sears' objection to the general practitioner not being accommodated very well, I would say that I think it would work him no hardship. There would be twice the number of papers and he could go to whichever section he pleased. It could be so arranged that if a general practitioner did not care to listen to a specialist's paper he could go to the other section. I do not believe it would be any hardship to the general practitioner to have two sections going at once.

Dr. Hitz: I would object to mixing up the sections as Dr. Washburn suggests. Let us have a section devoted to special subjects, and a section devoted to general subjects, taking in general surgery and general medicine, and the specialties in the other section. Then a man knows what he is going to get.

Dr. Sarles: I think that the committee should consider that question.

Dr. Hitz: I merely make that suggestion because Dr. Washburn took the other view of it.

Dr. Washburn: In Illinois the sections are numbered 1 and 2 and the papers are equally distributed.

Secretary: How does it work?

Dr. Washburn: They have had the plan in operation for quite a number of years to my knowledge, and I do not think they would continue it unless it worked satisfactorily. It seems to be this plan would be more satisfactory than to divide along special lines, because I think that most of the men who come here desire to hear papers on medical, surgical, and obstetrical subjects, as a whole, whereas very few would care to spend very much of their time listening to the more difficult subjects in special departments.

Dr. H. B. Sears: I do not wish to prolong this discussion, although my feelings are very decided, and I am convinced that it is an important move. It seems to me the matter should be referred

to the general session for an expression. I would very much prefer seeing the number of papers limited still further, than have a division of the program and the necessary loss of one-half of it.

PRESIDENT: I think a number of the speakers have lost sight of one thing, that Dr. Sarles' motion is only for an experiment. After a trial for one year you can discuss this matter much more intelligently than you can now. If Dr. Sarles' motion were for a permanent change I should oppose it very strongly myself, for the reason that, although nearly 400 members are registered, a great many of the papers have been read to fewer men than are in this room at the present time, and if you divide the society into two or three sections you who have spent time to get up a paper will be very much discouraged to have to read it to half a dozen men.

I am glad that the motion is only directed toward an experiment. I think after one year's trial you will be perfectly willing to go on as you have done.

For the benefit of those who have just come in I will briefly state that the motion of Dr. Sarles is to instruct the Committee on Scientific Work to so arrange the programme that the society can be divided into two sections next year, as a trial.

Motion carried.

DR. EVANS: I offer the suggestion, and I am willing to make it in the form of a motion, following up the line of Dr. Boothby's paper yesterday, that next year we give no space nor sell ourselves to the proprietary medicine men.

DR. SARLES: Just try it one year.

DR. EVANS: I would be willing to except from that list the White Rock Lithia, or something of that sort.

DR. SARLES: I move that it be left to the Committee of Arrangements to decide what shall appear in the exhibits.

Motion carried.

DR. SEARS: A member residing near the county lines and desiring to join a society in an adjoining county should follow the suggestion of the Constitution, asking first the permission of the society of the county in which he lives. This is only fair, as it saves the secretary of the county society much work and annoyance, while not interfering with his choice. It is also observing a slight courtesy which is due the profession of the county in which he may live.

SECRETARY: There is another matter to be considered, regarding the men who have been previously members of the society and who do not now live in the state; for instance, there was an application which came from Menominee, Michigan; and in other parts of the northern peninsula are men who up to this time have been members of the state society, and wish to remain such if they can constitutionally. They wish to have their status defined.

DR. SARLES: They can be honorary members but not active members.

DR. SEARS: I suggest that they get permits from their states to come and join our society.

DR. HITZ: Is there no provision in the Constitution for non-resident members?

DR. SARLES: There is no non-resident list.

DR. HITZ: Why should there not be?

DR. SARLES: How can a member be in good standing in Illinois and Wisconsin, too?

DR. HITZ: He could be a non-resident member.

DR. SARLES: It is contemplated that a man cannot operate in two states. He must be a member of his county before he can belong to a state medical society. This society is no longer under its own control except through the county societies; so he can only come in under some other provision.

DR. BYRON M. CAPLES: If he is an honorary member of a county society then he could be an honorary member of the state society.

DR. SARLES: Yes, by common consent. He can be an honorary member of one county society and thus of the state society.

SECRETARY: We have had in all an attendance of 50 delegates. There are several newly organized counties, four at any rate, organized within the last week, which have hardly had time to send delegates.

The following communication was referred back to the House of Delegates for action:

LOUISVILLE, Ky., March 18, 1904.

Dr. Charles S. Sheldon, Sec. State Medical Society of Wisconsin, Madison, Wis.

MY DEAR SIR: At the last meeting of the Mississippi Valley Medical Association, in Memphis, its constitution was revised to conform to the requirements of the American Medical Association, looking to an affiliation with the latter as one of its district branches. Action is expected upon our application to be taken at Atlantic City next June, with every prospect of a favorable vote, as the Committee on Promotion has recommended that we be admitted.

Believing, then, that we will be a branch of the American Medical Association at our next meeting in Cincinnati, and operating under the new constitution, it will be necessary for each of the component societies to appoint two of its members to represent their Association in the House of Delegates. Hence I would appreciate it, if you will bear this in mind and have the president of your Association appoint two of your members as delegates and present their names to me for record as soon after your next meeting as possible. I enclose a copy of the constitution and by-laws for your guidance.

Thanking you in advance for your assistance, I am,

Very sincerely yours,

HENRY ENOS TULEY, *Secretary.*

DR. SARLES: That matter was tabled at Atlantic City. They did not want to accept any of these associations. That boundary matter we postponed for a year, and it includes the matter just presented.

On motion the communication last read was placed on file.

PRESIDENT: I would like to call attention of the councilors present here to the fact that they should meet today and outline the work for the coming year, and they will meet in this room directly after the adjournment of this meeting.

There is one other thing that would properly come up now. In the Constitution the number of councilors is named as 12. In the by-laws the number of councilors is named as 10.

DR. S. S. HALL, of Ripon: This is a correction of a mistake in the printing of the Constitution and by-laws. We actually have 12 councilors. Is there any law against our saying we have 12 councilors in the by-laws?

PRESIDENT: The by-laws must conform to the Constitution. If there is anything in the by-laws that does not agree with the Constitution then it must be changed. Therefore, 12 councilors must stand without any further action.

One thing I would like to call to the attention of the councilors, and it is merely a suggestion, that the report of the council to the delegates should be a general report by the chairman of the council and not by the individual councilors, as done this year.

On motion the House of Delegates adjourned *sine die.*

MINUTES OF THE FIFTY-EIGHTH ANNUAL MEETING OF THE STATE MEDICAL SOCIETY OF WISCONSIN, MILWAUKEE, JUNE 22, 23, 24, 1904.

PROCEEDINGS OF THE GENERAL SESSION.

Wednesday, June 22, 11 a. m.

Minutes of the Fifty-eighth Annual Meeting of the State Medical Society of Wisconsin, held at the Athenæum, Milwaukee, June 22, 23 and 24, 1904.

The meeting was called to order at 11 A. M. Wednesday, June 22nd, 1904, by the president.

An invocation was pronounced by the Rev. David J. O'Hearn, of Milwaukee.

Hon. David S. Rose, Mayor of Milwaukee, then delivered the address of welcome, which was responded to by Dr. J. F. Pritchard.

Dr. A. T. Holbrook, chairman of the Committee of Arrangements, then presented his report as follows:

MR. PRESIDENT AND GENTLEMEN: Your Committee of Arrangements would call attention to the fact that the plans for convention this year were made under unusual circumstances. It is the first meeting under the reorganization, and having no precedent to show us how many members might be present at this meeting, we have had to forego some of the traditions of the society, and we ask you to excuse any innovations that may come into this meeting.

In the first place, we have had to give up the hall in the central part of the city in which we have usually met, because under the reorganization we have had a great many more members, and must provide for simultaneous meetings of the House of Delegates and the convention, which necessitates an

extra hall, in addition to rooms for committees and commercial and pathologic exhibits. This necessitates our renting a building instead of a hall: but the extra steps that you have to take in coming here, will, I have no doubt, be compensated for by the comfort of meeting in this building.

The entertainments that have been provided for the convention are, in the first place, the smoker which the Milwaukee Medical Society so generously and courteously has invited us to attend this evening at their rooms in the Goldsmith Building. This will be an informal jollification affair, and will be held at 8 o'clock.

To-morrow night would, under tradition, be the night for the annual banquet, but your committee has felt this year that a banquet such as we have had heretofore, might be a very unwieldy and awkward affair, and for this meeting, at least, we are going to substitute for the banquet a more informal entertainment. This will be in the nature of a soiree concert at the Deutscher Club. The concert will begin at 8 o'clock, and during the evening a light supper will be served. I might say that we do not plan to give you a dinner, but we suggest that you take your dinners at home and come there expecting a light supper during the evening. The expense of this entertainment is going to be a dollar a ticket, a dollar for the men and a dollar for the women. The entertainment for the visiting ladies has been arranged by the ladies of the households of the members of the Medical Society of Milwaukee County, who have taken a great interest in this meeting. On the last page of the program is a list of entertainments for the ladies in attendance; and a request for the gentlemen who have ladies accompanying them on this trip, to notify the secretary of the Milwaukee ladies.

The exhibit by the commercial men down stairs I think could well be spoken of here. These men go to a considerable expense, and a man must be either extremely learned or extremely ignorant who could not be benefited by a trip about the side show.

The pathologic exhibit is being put in place. The mills of the gods grind slowly, but I think the pathologic exhibitors made them appear like amateurs. However, we shall have the exhibit in place before the convention is well under way; and I want to say to any members who have pathologic specimens that they have brought with them or expressed here, that we should be glad to have them look up these specimens and get them into place just as soon as possible.

The railroad arrangements this year are the same that we have enjoyed for the past two or three years, and I must remind you to hand in your railroad certificates just as early as you can, in the room down stairs, where provision is made for signing them and later returning them to you; because if 100 of these certificates are not signed the rates will not become effective.

If there are any facts about the arrangements of this convention that are not understood, you can find out about them in the secretarys' room down stairs.

On motion the Society adjourned until 2 o'clock P. M.

Wednesday, June 22, 2:15 p. m.

Society was called to order by the president. Dr. Pritchard took the chair.

PRESIDENT PRITCHARD: The first business in order for the aft-

ernoon session will be the reading of the president's address—F. E. Walbridge, Milwaukee.

President Walbridge then read the annual address, after which the regular scientific program was called for.

Dr. G. F. Shimonek then read a paper on the subject of "The Indication for Enterotomy in some forms of Intestinal Obstruction, With Report of Cases."

On motion, paper referred.

PRESIDENT: Dr. Hitz is present and we will now listen to his report as chairman of the Program Committee.

Dr. H. B. Hitz then presented his report, as follows:

Mr. President and Members of the State Medical Society:

The by-laws under the recent reorganization designated "A Committee on Scientific Work," "Consisting of three members, of which the Secretary shall be one," etc.

The wisdom of this arrangement from the view point of the committee seems apparent, as the difficulty of getting material has been greatly simplified by the avoidance of the mass of correspondence hitherto found necessary when the committee has been large and unwieldy. Whether the results in the character of material will prove as satisfactory remains to be demonstrated.

Your committee held a number of meetings during the year and were otherwise in touch by correspondence.

At an early meeting, in order to allow liberal time for discussion, it was decided to limit the number of papers to 20, plus the several addresses. This was, at a subsequent meeting, increased to 22. In the October number of the Wisconsin Medical Journal (the official publication of the Society) the following announcement was made:

"To the members of the State Medical Society of Wisconsin: In preparing the program for the next meeting, the committee has passed a resolution cordially inviting all members, desiring to do so, to present papers. The titles and synopses must be in the hands of the chairman by Feb. 1, 1904.

The next meeting being the first following the reorganization, it is the earnest desire of the committee to present to the society a program that will not only be of high order from a scientific standpoint, but one that will be open to free and liberal discussion.

The time for the reading and discussion of papers being necessarily brief, the committee reserves the right to exercise its discretion in the matter of selection should the numbers of papers presented exceed the limit of twenty.

Under the new by-laws a limitation of twenty minutes is allowed for the reading of each paper, and in the discussion "no member shall speak longer than five minutes, nor more than once on any subject, except by unanimous consent."

All papers should be typewritten, and each member furnishing a paper should suggest the names of several members to take part in the discussion." And later in the December number attention was again called to the matter—as follows: "Referring to the preliminary announcement of the Program Committee in the October number of the JOURNAL, for the next meeting of the State Medical Society, *are you going to contribute a paper?* If so, communicate with Dr. Henry B. Hitz, chairman Program Committee."

The response in the matter of volunteer papers was fairly liberal from

Milwaukee county, but it is much to be regretted that so few were offered from the state at large, and when, later, after Feb. 1, personal invitations were extended, the acceptances were surprisingly small, so that it was decided to accept all the volunteer papers, which has resulted in giving to the program more of a "Milwaukee" complexion than may perhaps be desirable.

In consequence of this your committee has to suggest that in the future only a limited number of places be reserved for volunteer papers, and that the bulk of the program be secured from the outset by direct invitation of the Program Committee.

The program, as presented, contains the kernels of much profound thought and the committee counts itself singularly fortunate in having been able to secure the presence of two of America's foremost thinkers in their individual lines of work, Dr. Roswell Park, of Buffalo, and Dr. J. C. Wilson, of Philadelphia.

It is the earnest desire of the committee that free and liberal discussion may follow each and every paper, and to that end it has endeavored to secure for the opening of discussion only those who expect to be present.

In closing the chairman wishes to personally express to the secretary of the society, Dr. C. S. Sheldon, and to Dr. J. S. Reeve, his appreciation of their valuable assistance in the preparation of the program as presented.

Dr. T. L. Harrington, of Milwaukee, then read a paper on "The Moral Aspect of Abortion, Craniotomy and Extra-Uterine Pregnancy." On motion, paper referred.

Dr. J. F. Ford, of Omro, then read a paper on "The Use of Drugs in Labor." On motion, paper referred.

Dr. A. J. Patek, of Milwaukee, read a paper on "Intermittent Claudication and Analogous Phenomena (Angina Pectoris, etc.)." On motion, paper referred.

Adjournment until Thursday, June 23rd, 1904, at 9 A. M.

General Session, Thursday, June 23, 9 a. m.

Meeting called to order by the president.

Dr. H. V. Würdemann, of Milwaukee, read a paper on "The Estimation of Indemnity in the Case of Accidental Loss of One or Both Eyes." On motion, paper referred.

Dr. E. L. Boothby, of Hammond, then read a paper on "The Lack of Progress in Scientific Therapeutics." On motion, referred.

Dr. Louis Frank, of Milwaukee, then read a paper on "The Therapeutic Uses of the Roentgen-Ray in Dermatology." On motion, referred.

Dr. James C. Wilson, professor of medicine, Jefferson Medical College, Philadelphia, then delivered the Annual Address in Medicine, on "The Borderline Between Medicine and Surgery."

Dr. Reincking moved a rising vote of thanks. Motion unanimously carried.

Dr. C. W. Oviatt, of Oshkosh, then read a paper on "The Importance of the Early Removal of All Neoplasms, Whether Malignant or Benign, with Illustrated Cases." On motion, referred.

On motion, the society adjourned till 2 o'clock P. M.

Thursday, June 23rd, 2 p. m.

Meeting called to order by the president.

Dr. Charles Zimmermann, of Milwaukee, read a paper on "Affections of the Facial Nerve in Ear Diseases." On motion, referred.

Dr. L. F. Jermain, of Milwaukee, then read a paper on "Chronic Continued Secretion of the Gastric Juice." On motion, the paper was referred.

Dr. G. D. Ladd, of Milwaukee, then read a paper on "Hydronephrosis." Paper referred.

PRESIDENT: It gives me great pleasure to introduce Professor Roswell Park, Professor of Surgery, University of Buffalo, who will address you on the subject of the "Surgical Treatment of 'Dyspepsia.'"

Dr. Charles Mayo, of Rochester, Minn., was invited to the platform. Dr. Park then delivered his address.

DR. NOLTE: I move that a rising vote of thanks be extended to Professor Roswell Park for the splendid paper that he has offered us.

Motion seconded and unanimously carried by rising vote.

Dr. S. R. Moyer, of Monroe, suggested that his paper on "A Glimpse Into the Past, Present and Future of Therapeutics" be read by title to give time for the reading of Dr. Gordon's paper, which was done.

Dr. William Mackie, of Milwaukee, then read a paper on the "Surgical Treatment of Cirrhosis of the Liver, with Report of a Case." On motion, referred.

Dr. W. A. Gordon, of Winnebago, then read a paper on "The Establishment of an Epileptic Colony in Wisconsin." On motion, paper referred.

The discussion on this paper culminated in the introduction of the following motion by Dr. Gordon:

DR. GORDON: I move that the Committee on Public Policy and Legislation be instructed to present to the next session of the Wisconsin Legislature a proposition looking to the establishment of a colony for epileptics in this state.

Motion seconded.

DR. GORDON: There is an election coming on, I believe, in this state this fall—I have heard a rumor of that kind—and the members of the legislature come from a very small circle of people; they are always very accessible before election time, and they will come to see us, and if every doctor who is a member of this society and is interested at all in this proposition will make it his business to confer with candidates on this subject, there is not one but would be glad to introduce a bill, if spoken to before election, but after the election some of the gentlemen get "chesty"; when they get to Madison they are quite different individuals. And you are sometimes amazed at what a small person you are when you come in contact with some great legislative committee, and you wonder how such great men are willing to serve the people in the lowly capacity of

assemblymen. Our time is before election, and not after. We can get it next year if we organize ourselves. The medical profession in this state is in a position to do business and make its power felt more than it has ever been before in the history of the state. We are being unionized. The barber gets a respectful hearing, the plumber gets a respectful hearing, and at last we are in a position to no longer be ignored and patronized by men who are beneath us in everything that makes a man: and if our united profession demands this thing or any other proposition that is humane and philanthropic and reasonable, there is no question but what we could get it.

Dr. G. E. Seaman, of Milwaukee: I would like to suggest as a member of the Committee on Legislation, that for this purpose—if this is to be a success—the committee would like to have added the names of Dr. Gordon and Dr. Dewey, or any other of the gentlemen who are especially interested in the subject. I think it would be well to do that.

President: That will be a matter for the House of Delegates.

Motion carried.

Dr. W. E. Ground, of Superior, then read a paper on "Early Diagnosis of Ectopic Gestation."

On motion, paper referred.

General Session, Friday, June 24, 9:15 a. m.

General session called to order Friday, June 24th, 9:15 A. M., by the president at the Athenæum.

Dr. P. H. McGovern, of Milwaukee, read a paper on "A Review of Laryngeal Diphtheria with a Report of Cases."

Dr. Edward Evans, of La Crosse, read a paper on "Report of a Case of Perineo-rectal, Transvesical Perforation of Peritoneum."

On motion, paper referred.

Dr. Wm. Sickles, of Milwaukee, then read a paper on the subject of "Radio-activity; the Therapeutic Results We May Expect at Its Present State of Development."

On motion, paper referred.

Dr. C. J. Combs, of Oshkosh, then read a paper on the "Quantitative Estimation of Urea and Its Significance."

On motion, paper referred.

Dr. A. W. Myers, of Milwaukee, then read a paper on "Some Methods of Home Modification of Milk in Infant Feeding."

On motion, paper referred.

Dr. J. P. Cox, of Spooner, then read a paper on "General Practice in Northern Wisconsin."

On motion, paper referred.

President: Dr. Coon, of the Committee on Tuberculosis, will now make his report.

Dr. J. W. Coon, of Milwaukee: At the last meeting of this society these resolutions were presented and adopted:

Resolved, That the Wisconsin State Medical Society coöperate with the smaller medical societies throughout the state for the dissemination of knowledge regarding tuberculosis and the establishment of sanatoria for the treatment of the consumptive poor; be it further

Resolved, That the president appoint a committee of five to devise plans for the furtherance of these ends, such committee to report to the next annual meeting of the society.

At no time in the world's history has the subject of tuberculosis received such universal attention and study as at present. While a communicable and almost universally prevalent disease, it has been conclusively demonstrated that tuberculosis is not only preventable, but, if taken in its early stage, one of the most curable of diseases.

The results of sanatorium treatment in a large number of such institutions in Europe and in our own country show that from 65 to 75 per cent. of cases of pulmonary tuberculosis are curable in the early stage. But the results of sanatorium treatment, excellent as they are, are not by any means confined to this 65 or 75 per cent. of cases, whose lives are thus saved. The patients go out from the institutions where they have been treated, to become apostles to their friends and relatives of the methods of hygienic living, and methods of prevention which have been thoroughly taught them during their stay in the institution. Herein lies one of the most valuable features of sanatorium treatment, and who can form an estimate of the good accomplished, the cases of tuberculosis prevented through this practical means of education?

Already quite a number of states have provided sanatoria for the care of the tuberculous poor, among them being Massachusetts, New Jersey and New York, while our sister states of Minnesota, Michigan, Illinois and Indiana are actively engaged in efforts to secure such institutions.

Surely our own state cannot afford to lag behind the procession in this grand work of humanity. There is, at present, a very active interest being manifested throughout the state regarding the subject. One or more private sanatoria have been opened and others are being projected. The question will naturally arise as to the adaptability of our Wisconsin climate with its long, cold winters, its damp, cloudy weather during so considerable a portion of the year, to the successful treatment of consumption. While it is quite possible that our climate is not ideal, in every respect, the splendid results achieved in the eastern sanatoria, notably the Massachusetts state institution at Rutland, and the Adirondack Cottage Sanatorium of Saranac Lake, neither of which possess a climate milder or in any way superior to that of Wisconsin, must carry positive assurance that similar results can be obtained in our own state. At the last session of our legislature a bill was introduced providing an appropriation of $100,000 for the purpose of establishing a state sanatorium which should care especially for the tuberculous poor. This bill was killed, but a substitute was passed providing for the appointment of a State Tuberculosis Commission which was authorized to make a thorough study as to the prevalence of the disease in the state, the

best means of prevention, methods of treatment, the advisability or necessity of securing a state sanatorium, available or appropriate sites for the same, etc., the commission to report the results of their investigations, with recommendations relative thereto, to the next legislature. This commission, consisting of Dr. Gustav Schmitt, of this city, Dr. Michael Raven, of Merrill, and Prof. H. L. Russell, of Milwaukee, are engaged at the present time in making a very exhaustive study of the subject, not only as to existing conditions in this state, but as to what has been and is being done in other parts of the Union regarding the solving of this most important problem. It is sincerely to be hoped that by the concerted action of the members of this society with the State Tuberculosis Commission the next legislature may provide a state sanatorium of which we may be justly proud.

The Medical Society of Milwaukee County, at its March meeting, appointed a Tuberculosis Commission of seven members, with Dr. Wingate chairman, to "Take up the question of arranging a public educational exhibition upon tuberculosis and to consider the establishment of accommodations in Milwaukee for the treatment of the tuberculous poor." This commission is actively engaged in making plans for carrying out the work for which it was created.

Arrangements are being perfected for an exposition of several days' duration, in the late fall or early winter, in which the keynote shall be "Education of the lay public." Lectures will be given by men eminent in this line of work, graphic charts and diagrams with statistical tables will be prepared and exhibited showing the prevalence of tuberculosis, especially in its relation to certain parts of our city, the number of deaths annually from the disease, during the different age periods, the actual enormous financial loss to the community from and by reason of these deaths, the best methods and results of treatment, etc. The plan in general is for an exhibition along the lines of that held in Baltimore the beginning of the present year, with which you are all more or less familiar.

It is quite probable that much excellent work is being done by individual members of this society, and by the various municipal health authorities throughout the state, which has not come to our knowledge.

In conclusion your committee would respectfully present the following recommendations for the consideration of the society:

First. That a committee on tuberculosis of this society, consisting of five members, be appointed to continue the work indicated by the resolution which provided for the appointment of your present committee.

Second. That the Committee on Legislation of this society be especially requested to coöperate with the State Tuberculosis Commission, and by all means within their power assist in promoting legislation having for its object the establishment of a state sanitorium where the tuberculous poor and those in but moderate circumstances can be treated. We further recommend in this connection, that instead of making such institution absolutely free, that it would be better policy that a moderate charge be made for each patient treated therein, and that where the patient is absolutely unable to pay anything for

his care and treatment, the town or city of which he is a resident should be required to pay such sum as may be decided upon, but which shall not exceed one-half the actual expense of this maintenance at such sanitorium.

Third. That each county and district society appoint a committee on tuberculosis, whose duty should be to attend to all matters properly coming under their jurisdiction, within the county or district of which they are residents and to coöperate with the committee of the state society, the state and local boards of health, in matters relating to the subject of tuberculosis.

Fourth. That in addition to the State Sanatorium herein recommended, it would be a wise and beneficial plan to have sanatoria provided in Milwaukee and a few of the larger cities of the state, in as much as it would be manifestly impossible to provide necessary accommodations for all who should be cared for in the state institution.

Fifth. That the Program Committee of this society be requested to ask some competent member or members of the society to present papers at the next state meeting on the different phases of this most important subject.

J. W. Coon, M. D.,
T. L. Harrington, M. D.

Motion was made, seconded, and unanimously carried that the report be accepted and adopted and the recommendations therein contained be carried out, and so ordered.

Secretary: I move that Dr. Kletzsch's paper on the "Therapeutics of Diseases of the Female Pelvis" be referred to the Committee on Publication. Carried.

I will read the resolution adopted by the House of Delegates in reference to the committee appointed by the governor:

Whereas, There has been appointed by the state executive, Gov. La Follette, a committee known as the Wisconsin State Tuberculosis Commission, and

Whereas, We are in hearty accord with any movement whose aim is to eradicate this scourge so prevalent here; be it

Resolved, That this society respectfully urge the desirability of the executive and legislative bodies of our state giving all the moral and material support necessary for the official carrying out of the objects aimed at by this committee.

Dr. Hugo Philler, of Waukesha: I move its adoption and that the recommendation be carried out. Motion carried.

Secretary: The following communication was also referred to the general society from Dr. Keen:

Philadelphia, July 25, 1903.

My Dear Doctor: At the New Orleans meeting of the American Medical Association, a committee, of which I am chairman, was appointed to take necessary steps toward raising $20,000 for a memorial to the late Dr. Walter Reed, U. S. A., in commemoration of his remarkable services, both professionally and humanitarian in reference to yellow fever.

In pursuance of this object, will you kindly send to me within the next ten days, if possible, to 823 Beach avenue, Cape May, N. J. (where I am staying for the summer) a list of the secretaries, with their addresses, of each county medical society in your state? If there is no secretary, please send me the name of the president.

While doing this let me say it is of great importance, that at the next meeting of your state society this matter shall be brought to the attention of the society and suitable measures taken to raise as large a sum as possible.

It is not contemplated that the subscriptions shall be limited to the profession. In fact, as the general public will benefit much more than the profession from Dr. Reed's researches, it is particularly desirable that the general public shall be solicited to subscribe to this worthy effort.

You will find an excellent biographical notice of Dr. Reed and his work in the *Journal of the American Medical Association* for Nov. 29, 1902, p. 1402.

Yours very truly, W. W. KEEN, *Chairman.*

Motion was carried that the communication be placed on file.

A brief resumé of the business transactions of the House of Delegates was then presented by the secretary.

PRESIDENT: I thank you for your courtesies and ask you to overlook any mistakes made by your presiding officer, as this is my first experience in matters of this kind. I want also to congratulate the society upon the character of the papers that have been read. We have been fortunate in getting through with all the papers except two, Dr. Kletzsch's paper, which the doctor was not present to read, and Dr. Moyer's, who gave way in order that Dr. Gordon might have an opportunity to read his paper, as he wanted to leave town.

The character of the papers will, I am satisfied, compare favorably with those of any similar society. Gentlemen, I thank you.

The society then adjourned *sine die.*

BOOK REVIEWS.

International Clinics—A Quarterly of Illustrated Lectures. Edited by A. O. J. KELLY, A. M., M. D. (The *J. B. Lippincott Co.*, Philadelphia.) Vol. II, Fourteenth Series.

The first 133 pages of this volume are devoted to a series of papers on diseases of warm climates, specially interesting at this time when so large a movement of population is taking place between America and the West Indies and the Philippine Islands.

Following this series of articles is a section on treatment. There are four articles in this section, one on the Etiology, Diagnosis and Treatment of Arterio-Sclerosis, by John B. Nichols, of Washington, D. C.; one on The Significance and Treatment of the Gastro-Intestinal Form of Arterio-Sclerosis, by Walter L. Bierring, of Iowa City, Iowa; one on The Limitations of the Utility of Digitalis in Heart Disease, by James M. French, of Cincinnati, and one on Cardiac Valvular Disease with Broken Compensation, by Eli H. Long, of Buffalo, N. Y. These articles are specially timely in view of the recent wide attention which has been given to these subjects, both in the periodic literature and in medical society meetings. The subjects are handled in a thoroughly practical and original manner and the articles represent the present status of knowledge and opinion.

Billings, of Chicago, contributes an article on Carcinoma of the Pancreas with Jaundice; Cardio-Renal Disease; Atheroma of the Aorta and Aortic Insufficiency; Tuberculous Peritonitis; Pressure Neuritis. Wm. H. Katzenbach, of New York, contributes a clinical lecture on Neurotic Asthma.

A number of valuable and interesting surgical papers fill over fifty pages of the volume. A noteworthy feature of these papers is the illustrations introduced, especially in the case of Osteomalacia, a paper written by Geo. E. Malsbary, of Cincinnati, and cuts illustrating the paper of J. Torrance Rugh, of Philadelphia, on Ankylosed Joints and Their Non-Operative Treatment.

The volume closes with an article by Isaac A. Abt, of Chicago, on Bronchopneumonia in Children, and one on Nasal Obstruction, by Frances J. Quinlan, of New York.

This volume contains an unusual number of illustrations, a few of which are colored. These illustrations serve the double purpose of clarifying the text and embellishing the book. (W. H. W.)

The Therapeutics of Mineral Springs and Climates.—By I. Burney Yeo, M. D., F. R. C. P. (*W. T. Keener & Co., Chicago.*) 1904. Net $3.50.

This volume is the last installment of a trilogy by the same author bearing upon the subject of therapeutics. We quote the following paragraph from the preface of this volume:

"The author in his 'Manual of Medical Treatment' has dealt generally with the subject of Clinical or Practical Therapeutics; in his work on 'Food in Health and Disease' he has treated specially of the Therapeutics of Food; in the present volume he has taken for his subject 'The Therapeutics of Mineral Springs and Climates.'"

Without question the study of climates and mineral springs is a very important and even essential subdivision of our therapeutics but unfortunately relatively few physicians possess a sufficiently intimate acquaintance with this matter to be of as great service to their patients as might be desirable.

This volume is divided into two parts, the first bearing upon "'Mineral Springs," the second upon "Climate and Climatic Resorts."

In part one the author explains very lucidly the nature and composition of mineral springs and the modes of application and action of the waters; he describes in detail the principal mineral springs and mentions the diseases for which the individual spas are indicated. This latter is an especially valuable chapter.

In part two the various mountain and seaside resorts—for winter and summer cures—are dwelt upon, and one chapter is devoted to a consideration of sea voyages and the benefit to be derived from them. In the last chapter are given rules and good advice for the proper application and selection of climates for particular diseases.

The book is a very valuable addition to the practitioner's library, and will doubtless be consulted with much profit by those who desire to send patients abroad for their health. Unfortunately there is but meagre reference to climatic and mineral spring resorts of our own country. (A. J. P.)

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ORIGINAL ARTICLES.

THE MORAL ASPECT OF ABORTION, CRANIOTOMY, AND EXTRA-UTERINE PREGNANCY.*

BY T. L. HARRINGTON, M. D.,

MILWAUKEE.

We have heard much during the past few months on "the decay of the American family." For no class of men should this subject have a more vital interest than for the physician. Certainly it touches no class more closely than the members of the medical profession. Yet you are all aware that we have in the medical profession a large body of men who have had no positive teaching on the great moral questions which confront the physician in his daily work and whose actions are largely determined by present expediency. It is because of this lack of positive teaching on these moral questions that we have such a variety of opinions among conscientious physicians, and such a variation in the conduct of different men when they are brought face to face with these trying situations. Let us look to-day at the problems involved in abortion, craniotomy and extra-uterine gestation, and let us determine, if we can, whether or not the physician is ever justified in destroying the human embryo.

The great body of scientific men are agreed that from the moment of conception the human embryo is a human being, having an immortal soul. We can no longer accept the teaching of Aristotle, who believed that the fetus did not attain life till the fortieth day after the fruitful coition. It is interesting to note that theologians and biologists agree as to the time at which the embryo attains indi-

*Read at the 58th Annual Meeting of the State Medical Society of Wisconsin, Milwaukee, June 22, 1904.

vidual existence. The former hold as a dogma, that, with the impregnation of the ovum, a new being instantly originates, endowed with an indestructible soul. While the biologist teaches that with the fusion of the male and female elements, vitality is established and a new being results.

In Wisconsin, the law shields the fetus from its first stage of ascertainable existence. And so, too, the unborn child is capable of inheriting property from the first moment of conception. This being true, let us look at the problems involved in abortion.

Is the physician justified in producing an abortion if he believes it necessary in order to save the life of the mother? I answer unhesitatingly, no. He is never justified in directly destroying one life in order to save another. The old command, "Thou shalt not kill," is still in force, and will continue in force till the end of time. It is not sufficient that you tell me that the mother's life is more important than the child's. You do not know that, and if you did, it would be no justification. You cannot measure the potential worth that lies dormant in that little organism. Remember that there was a time in the life of Shakespeare, of Michael Angelo, of Washington and of Lincoln, in which he who argues from present expediency might have held that the life of the mother was of more value than the life of the child. Deaver, in a recent article,[1] says: "A weighty objection to this is the fact that neither the surgeon nor the accoucheur is a legal executioner, even were he competent to judge between the intrinsic value of the two lives, each of which is equally under his care." Dr. A. Pinard, Professor of Obstetrics, in Paris, says[2]: "The right over the child's life and death belongs neither to the father nor the mother, nor the physician. . . . . To discuss from an economical or social viewpoint, the difference in value of the life of the mother and that of the child is simply monstrous." You cannot tell what rôle in the social economy of our country is to be played by any unborn child. And while the law of the state protects the physician, who, after due deliberation and consultation, destroys the life of the unborn child, there is a higher law which will not justify him.

If this teaching were followed by the great body of conscientious physicians, I am convinced that many lives would be saved that are now sacrificed. I quote the following from a recent controversy between Professor Treub and Dr. Th. M. Vlaming, both of Amsterdam, Holland[3]: "Once expediency secures sway in this domain, the door is but just opened to the abortion trade. Let one physician solemnly declare that nothing but the greater worth of life of a

housewife or mother may decide in the matter, and many others will at once come forth with other gauges in their hands, and the scales will rise against the fetus' interests, also for vile reasons, the preservation of an honor already forfeited, of love of ease, of heartless consideration of health, selfishness, etc. And you, men of honor, you have robbed yourselves both of the right and the strength to fight with the freedom of an inviolate conviction, such as are devoid of conscience; they will reduce you to silence by the assertion that their reasons for questioning the fetus' right to live are just as valid as yours. You will be weak, especially with unfortunate daughters of honorable families, who will conjure you to save them at any cost, as the dishonor to themselves and their families would be a far greater misfortune than the loss of one single life, which it is claimed is almost worthless from a social point of view."

Almost every young physician has had a case of what he supposed was uncontrollable vomiting of pregnancy. After a consultation it is found that careful nursing and rectal feeding tides the patient over what appeared to the physician to foreshadow a fatal issue to mother or child, or to both. Wharton and Stillé tell us in their Medical Jurisprudence[4]: "The sympathetic phenomena of pregnancy are often more alarming in appearance than in reality and will rarely justify any interference with the natural progress of gestation."

The basis of our jurisprudence is taken from English law, and a case decided by Lord Chief Justice Coleridge of England has a bearing on this discussion[5]: "On July 5th, 1884, the yacht Mignonette was lost at sea, and a part of the crew were cast away in an open boat. After they had been seventeen days without food, and five days without water, Dudley and Stevens, the prisoners, decided to kill a boy who lay helpless in the bottom of the boat. They argued that as they had families, their lives were of more value than his. Brooks, one of the crew, objected, but in spite of his protests, Dudley went to the boy, who was too weak to offer any resistance, and telling him that his time had come, cut his throat. They lived four days on his flesh and were then rescued by a passing vessel and taken to England, where Dudley and Stevens were tried for murder. The defense showed that if they had not sacrificed one life, all would have died from exhaustion. In spite of an able defense, they were convicted of murder and sentenced to hang." In a chapter in which he deals with the exception created by necessity, Lord Chief Justice Hale, quoted by Justice Coleridge, thus expresses himself: "If a man be desperately assaulted, and in peril of death, and cannot other-

wise escape except by killing an innocent person then present, the act will not acquit him of the crime and punishment of murder, for he ought rather to die himself than to kill an innocent one."

Let us now consider the question of giving medicine, or ordering a course of treatment for the pregnant mother which may indirectly cause the death of the fetus. What course shall the conscientious physician pursue? These questions are briefly answered in a recent work on medical ethics from which I quote[6]: "(1) If the medicine is necessary to save the mother's life, and it is not certain to bring on abortion, though it is likely to do so, then the good effect is greater or more immediate or direct than the bad effect; then give the medicine to save the mother and permit the probable death of the child. (2) If the medicine is not necessary to save the mother's life, though very useful, for the sake of such an advantage, you cannot justly expose the child's life to serious danger. (3) But if the danger it is exposed to is not serious, but slight, and the remedy, though not necessary, is expected to be very useful to the mother, you may then administer the medicine; for a slight risk need not prevent a prudent man from striving to obtain very good results. (4) But if the drug is necessary to save the mother, and as dangerous to the child as it is beneficial to her, can you then give the medicine with the moral certainty that it will save her and kill her child? When we know principles clearly we can apply them boldly. I answer then, with this important distinction: You can give such medicine as will act on her system, her organs, in a manner to save her life, and you may permit the sad effects which will indirectly affect the child; but you cannot injure the child directly as a means to benefit her indirectly; that would be using a bad means to obtain a good end."

I shall close my discussion of the question of abortion by quoting from a lecture of the late Dr. Hodge, of Philadelphia, to the medical students of the University of Pennsylvania[7]:

"We blush while we record the fact that, in this country, in our cities and towns, in this city where literature, science, morality and Christianity are supposed to have so much influence, where all the domestic and social virtues are reported as being in full and delightful exercise; even here individuals, male and female, exist who are continually imbruing their hands and consciences in the blood of unborn infants; yea, even medical men are to be found who, for some trifling pecuniary recompence, will poison the fountains of life, or forcibly induce labor, to the certain destruction of the fetus and not unfrequently of the parent.

"So low, gentlemen, is the moral sense of the community on this subject, so ignorant are the greater number of individuals, that even mothers, in many instances, shrink not from the commission of this crime, but will voluntarily destroy their own progeny, in violation of every natural sentiment and in opposition to the laws of God and man. Perhaps there are few individuals in extensive practice who have not had frequent applications made to them by the fathers and mothers of unborn infants (respectable and polite in their general appearance and manners) to destroy the fruit of illicit pleasure under the vain hope of preserving their reputation by this unnatural and guilty sacrifice.

"Married women, also, from the fear of labor, from indisposition to have the care, the expense, or the trouble of children, or some other notion equally trifling and degrading, have solicited that the embryo be destroyed by their medical attendant. And when such individuals are informed of the nature of the transaction, there is an expression of real or pretended surprise that any one should deem that act improper, much more guilty; nay, in spite of the solemn warnings of the physician, they will resort to the debased and murderous charlatan, who, for a piece of silver, will annihilate the life of the fetus, and endanger even that of its ignorant or guilty mother.

"This low estimate of the importance of fetal life is by no means restricted to the ignorant or to the lower classes of society. Educated, refined and fashionable women, yea, in many instances, women whose lives are in other respects without reproach, mothers who are devoted with an ardent and self-denying affection to the children who already constitute the family, are perfectly indifferent concerning the fetus in utero. They seem not to realize that the being within them is indeed *animate*, that it is in verity a *human* being, body and spirit; that it is of importance; that its value is inestimable, having reference to this world and the next. Hence, they in every way neglect its interests. They eat and drink, they walk and ride, they will practice no self-restraint, but will indulge every caprice, every passion, utterly regardless of the unseen, unloved embryo.

"These facts are horrible, but they are too frequent and too true; often, very often, must all the eloquence and all the authority of the practitioner be employed; often he must, as it were, grasp the conscience of his weak and erring patient, and let her know in language not to be misunderstood, that she is responsible to her Creator for the life of the being within her."

Let us pass now to the question of extra-uterine gestation. If

we apply the same principles that helped us in our discussion of abortion, we shall be reasonably sure of our ground. The danger from an extra-uterine pregnancy during the early weeks of gestation is that the sac may rupture, causing a hemorrhage, which is nearly always fatal to the child, and entails great danger to the mother.

We are justified in removing the sac, after an abdominal section, though in doing so we permit or indirectly cause the death of the fetus. If the embryo has passed the fourth or fifth month of gestation before the condition is discovered by the physician, and if there are no symptoms of immediate danger, the patient should be carefully watched, and operative interference should be postponed till the child has become viable, with the hope of saving both mother and child.

This course is in harmony with the teachings of advanced scientists, as well as of our most exacting moralists.

Passing now to the question of craniotomy: I think I enunciate the position of the great body of progressive obstetric surgeons when I say that craniotomy on the living child is never justifiable. The great Pinard, of Paris, had these words painted on the walls of his lecture room: *Craniotomy of the living child has had its day.*

Dr. James Murphy, of the University of Durham, president of the British Medical Association in 1893, in his address delivered at the opening of the section of obstetrics and gynecology, spoke as follows[8]: "In cases of great deformity of the pelvis it has long been the ambition of the obstetrician, when it has been impossible to deliver a living child *per via naturales*, to find some means by which that child could be born alive with comparative safety to the mother, and that time has now arrived. It is not for me to decide whether the modern Cæsarean section, Porro's operation, symphyseotomy, ischio-pubotomy, or other operation is the safest or most suitable, nor yet is there sufficient material for this question to be decided; but when such splendid and successful results have been achieved by Porro, Leopold, Sanger and by our own Murdock Cameron, I say it deliberately and with whatever authority I possess, and I urge it with all the force I can master, that we are not now justified in destroying a living child, and while there may be some things I look back upon with pleasure in my professional career, that which gives me the greatest satisfaction is that I have never done a craniotomy on a living child.

"While the mortality of Cæsarean section was at 70 or 80 per cent., much could be urged in favor of craniotomy. But now that women can be delivered by abdominal section at a mortality of 10

per cent. or less, craniotomy is a perfectly unjustifiable operation in my opinion, except in the case of a dead child, or perhaps in some diseased condition of the fetus, as hydrocephalus."

I shall close this discussion with one other quotation. Dr. W. H. Parish, of Philadelphia, spoke as follows ten years ago[9]: "Advanced obstetricians advocate the performance of the Cæsarean section or its modification—the Porro operation—in preference to craniotomy, because nearly all the children are saved and the unavoidable mortality among the mothers is not much higher than that which attends craniotomy. Of one hundred women on whom Cæsarian section is performed under favorable conditions and with attainable skill, about ninety-five mothers should recover and fully the same number of children. The problem resolves itself into this —which shall we choose, Cæsarean section, with one hundred and ninety living beings as the result, or craniotomy with about ninety-five living beings."

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3. The Right to Life of the Unborn Child, page 114.
4. Medical Jurisprudence—Parturition, page 96.
5. Coppens, S. J., Moral Principles and Medical Practice, page 83.
6. Coppens, S. J., Moral Principles and Medical Practice, page 68.
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9. American Ecclesiastical Reviews, November, 1893.

Discussion.

Dr. J. J. McGovern, of Milwaukee: In opening the discussion on this important subject, I wish first to thank Dr. Harrington for calling our attention to it at this time. If he continues his work and keeps this subject before the profession year after year, he will succeed in arousing such an interest that it will make it more difficult, at least, for anyone to perform a criminal abortion.

I cannot, however, agree with him when he answers, no, to the question—Are we ever justified in performing an abortion? I believe, on the contrary, that we are not only justified, but it is our duty under certain conditions to perform an abortion to save the mother's life. Again, I cannot agree with him that the mother's life is no more sacred than the life of the child. When we stop to consider that 15 to 20 per cent. of all conceptions abort spontaneously; that 5 to 15 per cent. of the remaining conceptions do not produce a living child; that 25 per cent. of living births die before the end of the first year, and that from 15 to 50 per cent. of children alive at the end of one year never reach maturity, we easily see that not over 40 per cent. of all conceptions reach maturity. When we consider the sacrifice made by

the mother, the important position in society occupied by her, and all of the dangers incident to child-bearing, is it too much to say that the life of the mother is to be considered before the life of the child?

Again, under certain conditions the child's chances for life are so small and the danger to the mother is so great, that we are not justified in running the chance of losing both lives. Take, for instance, in placenta previa, or in hydatidiform mole, where the chances of having a living child are so small and insignificant, that they should not be considered for a moment when we consider the great danger that the mother runs, were we to defer the performance of an abortion.

It does not follow that in advocating the sacrifice of the child to save the mother's life, you justify the wholesale destruction of unborn children. It does not in any way justify criminal abortion. Dr. Harrington argues that if you once admit the right of a physician under any circumstances to take the life of the fetus, it encourages the criminal abortionists. I cannot agree with the doctor on that point. I believe if we were to take the stand that Dr. Harrington advocates, that criminal abortionists would exist just the same. They exist because they are not interfered with. The medical profession is fully aware of their existence and frequently refers patients to them, and whenever one of these criminals is prosecuted for the death of one of their unfortunate victims, the medical profession, instead of doing everything in their power to aid in the prosecution, remain inactive, perhaps fearing consequences to themselves.

If the medical societies were to take charge of this subject and proceed systematically to exterminate this class of criminals, I warrant that in a comparatively short time it would be a very difficult thing to find a person who would take the risk of being sent to the penitentiary.

In regard to craniotomy, I heartily agree with Dr. Harrington. In tubal pregnancy we can again agree that immediate operation is indicated. To allow an advanced tubal pregnancy to run for the sake of giving the child a greater chance for living, would in my mind be unjustifiable. When the conditions are such that the mother's life is in peril, I believe the first consideration must be given the mother, even if it involves the destruction of the child.

Dr. Edward Evans, of La Crosse: I wish to extend my hearty congratulations to Dr. Harrington for his clear presentation of the moral aspect of abortion. In these days of progressive polygamy, when people enter the marriage state with a divorce application in one hand, and a safety device in the other, it requires rather a brave man to state fully and distinctly the moral standard that should be used by thinking, intelligent and supposedly educated men, as the medical profession are. If we will only live up to the principles enunciated to-day by Dr. Harrington, we will keep our honor bright and conscience clear, and that, after all, I believe is the first thing to guide any man, whether he be professional or otherwise, in his living.

The question of the justifiability of abortion was so clearly stated by the doctor that I do not think it is necessary to enter into it. If we take utility rather than high moral standard as our guide, then we may agree with the last speaker. If morals are to guide us then we must surely agree with Dr. Harrington. I was glad to hear him quote the case of the British brig Mignonette, where the sailors killed the boy for the sake of preserving their

lives. There I think the common law held justly that they were murderers, though they were more justified than any doctor can be in sacrificing the life of a child. It is generally admitted by scientists that life begins at the moment of conception. If so, no man (and the common law so holds) can say that under certain circumstances we are justified in taking life—in fact, we are never so justified: that is constituting ourselves judge and jury and hangman, and we are not justified in doing that on any grounds.

The question of criminal abortion is one that should be constantly kept before this society. A few years ago I had occasion to bring before this society this same question. It is one that is certainly worthy of being constantly kept before us. When we look at the last census returns and see that the native born population of Boston have a birth rate of 9 to 1,000, and the foreign born 39 to 1,000, and in New York the foreign born population births are 41 to 1,000, and the native born 11 to 1,000, we see that there are more than questions of economy involved.

Now, the parties too often primarily guilty of this crime are the doctors; that is a strong and a harsh statement to make, but it is a fact. When you can go into almost any town in Wisconsin and pick out (Do I exaggerate in saying?) 50 per cent. of the doctors who are known to be criminal abortionists, it seems to me to be rather a serious condition of affairs; yet that is the condition. The statement is not extreme at all. Gentlemen, you all know it. Any man who after taking the Hippocratic oath on the day of his graduation, will then prostitute his profession to the lowest and most degraded condition possible, should be stripped of the high title of M. D. We can easily excuse a woman, even a married woman, who wishes to be relieved of her burden, but the man who will for the thirty pieces of silver imbrue his hands in his fellow's blood is not worthy the name of doctor, and yet that is what a man does every time he commits abortion.

In regard to craniotomy the doctor's position, I suppose, will be generally admitted to be unassailable.

Dr. G. A. Heidner, of West Bend: There are some parts of this paper, particularly the first section of it, that is the section which applies to the matter of abortion, that every physician ought to have as a part of his armamentarium, and for that reason I would like it very much if the doctor would have at least a dozen reprints made for each member of this society, of the first section, so that whenever a woman comes to a member of this society and asks him to do one of those things the doctor so thoroughly condemns, he may furnish her with a copy for her edification.

Dr. G. J. Kaumheimer, of Milwaukee: The question of criminal abortion we are all agreed about, but I must differ from Dr. Harrington in saying that it is absolutely never permissible, justifiable or necessary to interrupt the course of pregnancy on account of any disease of the mother. It does not happen very often, thank God, but there are occasional cases, I believe, where through severe kidney disease, severe vomiting, through the sudden acceleration of the course of some other disease owing to the pregnancy, we are absolutely certain that we are not sacrificing one life by committing the abortion, but sacrificing two by allowing pregnancy to continue. Then it is a matter that we cannot settle by the vote of the medical society; and I believe that while, in general, Dr. Harrington is perfectly right, he makes

a mistake in laying it down as an absolute dogma that never, under any circumstances, ought we to produce an abortion. No physician ought to do it without full counsel, full consideration, without exhausting all the resources of his art and of his neighbor's art. But twice in the 15 years that I have practised I have come up square against it, and I believe that I can justify myself to my own conscience, and I believe that, at last, is the best critic of all.

In regard to Dr. Evans' speaking of criminal abortion, we cannot help it: it has always been with us and like another social evil always will be with us, and the men who have the title of M. D. who do that thing, are so far beyond the pale, that it is very hard to reach them. We cannot get witnesses. The women will tell us Dr. So-and-So did it for Mrs. So-and-So, and did it for herself two years ago; but she won't swear to it; hence, we cannot prove anything in court.

Dr. John S. Walbridge, of Berlin: I want to protest, if I understand Dr. Evans right, against his statement that 50 per cent. of the doctors are abortionists. I don't believe it. I do not believe 5 per cent. of the medical profession of Wisconsin are guilty of that charge.

Dr. I. D. Mishoff, of Milwaukee: In regard to statistics, I want to repeat a statement that I read not long ago. As far as births are concerned there is nothing that deceives so readily as figures. In England, where the records have been kept for centuries, it is stated authoritatively that as far as the number of births is concerned they are below what they were up to some years ago, and every year they seem to be decreasing; but on account of the larger vitality of the children born at present the percentage is really raised very greatly, and when in addition to that you eliminate the former greater illegitimate births, which ought never to occur at all, the percentage of births to population is, if not greater, now in England at least as great as ever.

Now, in regard to the abortionists, I hope that they are decreasing in inverse ratio to the improvement of our morals.

Another point: Is not the physician frequently somewhat presumptuous in asserting that the mother is in danger because of pregnancy? We are told that a woman sick with consumption has her life prolonged nine months by conception, and I think that is true in all other diseases, at least to a certain extent. Do not decide hastily that the mother is in danger of death because of pernicious vomiting. I know one case where the mother's life was supposed to be in danger, and she had her life saved on four different occasions, by the induction of abortion. After that she decided that she would take the chance, and she has two children now; and instances may be multiplied where men have decided that the mother's life is in danger, and the child's life is taken unnecessarily under the false notion that it is necessary to do so in order to save the mother.

Another thing: A great percentage of the blossoms of our trees fall down without becoming fruit. Will you, gentlemen of the medical profession, go to yonder tree and pick out the blossoms that will not produce fruit? No. Then you are much less qualified to go to the mother's womb and say, here is a useless blossom and I will pluck it out.

Dr. L. F. Bennett: I want to endorse the remarks of the last speaker. I do not believe it is ever necessary to perform abortion in a case of vomiting of pregnancy. I have seen as many cases in a general practice of 20 years as

has a majority of men in this body, and I have been convinced of this one fact, that if we hold out a little longer than some do we will be able to tide over cases, especially with all the facilities we have for rectal feeding, etc. I have never been forced to perform an abortion in cases of vomiting of pregnancy, or anything else, and I do not believe it is necessary.

Another thing I wish to say is, to protest against the statement that 50 per cent. of the doctors in Wisconsin are criminal abortionists. I do not believe it. I believe, however, that it is possible for a woman to secure somebody in almost every town, but those fellows are limited generally to one or two, and do not constitute the larger percentage of the medical profession, as was stated. We generally know who they are, but it is a hard matter to prove it—but 50 per cent. is too large and I protest against any such statement. I believe the great mass of doctors are honorable and would not do it.

Dr. E. M. McDonald, of Beaver Dam: I suppose it is not necessary to speak of this evil of abortion in this society, for the reason that we are unable to reach it. None of these doctors who commit abortion are members of the society, I presume. About half the doctors of the state belong to the State Medical Society, and it is the other half, the outsiders, that he refers to.

However wrong doctors may sometimes be in their treatment in the medical part of their profession, they should never be wrong in their theology. We have injected so much theology into this matter this afternoon that I think we ought to start right. I think Dr. Harrington was wrong when he said we should never, or were never permitted to, do an abortion. It is a rule in theology, as I think the doctor, from his profound knowledge of theology, would admit, that when one of two lives is in danger and must be sacrificed, the aggressor shall be destroyed—the doctor can decide the question for himself. But I think in *all* cases of absolutely necessary abortion, he will find the embryo the aggressor.

Dr. Karl Doege, of Marshfield: It seems that Dr. Evans divides physicians into 50 per cent. abortionists and 50 per cent. non-abortionists; 50 per cent. there are that have the courage to remain decent, and 50 per cent. there are that have the courage to do crime. I think myself that this proportion or this percentage is rather large, but we make a mistake if we consider these two classes only; there is still another class, the one that lacks in courage. I know of instances, and I think everybody does, where a female comes to a physician asking to be relieved of the fruit of intercourse; the physician himself does not want to undertake the work, but sends the woman somewhere else: "Go to some large center: go to this or that place." And I think that when Dr. Evans says that 50 per cent. of the physicians are abortionists, if you will include those physicians that have not the courage to do the work themselves, but send the patient somewhere for someone else to do it, he will not be found to have stated the percentage too high.

Dr. C. O. Thienhaus, of Milwaukee: I would like to make only a few remarks in regard to craniotomy, which the essayist discards indiscriminately. Now, take the following case: The country doctor, far away from surgical help, is called to confine a woman in a small, filthy house, in which even the experienced surgeon would hesitate to perform a Cæsarean section. On his arrival he finds the child in a transverse position, the contraction ring of the uterus ascending up to the navel, a sign which you know warns him

that rupture of the uterus is imminent, the child, however, contrary to his expectations, still living. Ought he not to do a craniotomy, knowing that an attempt at version of the living child would be followed by a rupture of the uterus and death? Have we not been taught in our schools and from the first clinics of the world, that because of the imminent danger of the rupture of the uterus, craniotomy must be performed regardless of the life of the child, under such conditions?

Certainly when that golden age has arrived when all physicians can do Cæsarean section under the most filthy conditions, without any assistance, with zero per cent. of mortality for both mother and child, then we will take our craniotomy instruments from our obstetrical bags or use them only for dead children. But so long as Cæsarean section done by the general practitioner who does not operate a dozen laparotomies each week and carry with him trained assistants and nurses in every case, would mean for the mother 99 per cent. of deaths, so long craniotomy on the living child must stand.

Dr. Lewis G. Nolte, of Milwaukee: I would like to say a few words on the abstract side of this subject. I thought the principles of this question were long since settled. I am sure that the problematic potential life of the child can never weigh against the actual, existent life of the mother. It has long been settled that the life of a mother outweighs that of a possible child any time. Of course we must not forget that methods of procedure and improvements in operating and advancement in that line will change our principles somewhat, but the mother will always stand first.

Whether craniotomy is necessary or whether it be some other operation for relief, the mother stands first, and the rest must be settled as we advance along the lines of improved operative surgery.

As to the question of criminal abortions getting the upper hand, if we advocate and permit justifiable abortion to save the mother, I am sure there is no danger. Those who are criminal abortionists to-day (and I admit that there are many of them, and it does seem to me that they are increasing in number) will have their nefarious and criminal work stopped by the good men of the profession, who, I am sure, will do all they can to prevent the increase of indiscriminate abortion. Calling good, honest men into consultation when a pregnant woman's life is in danger will prevent any hasty or criminal work.

As to Dr. Harrington's comparison of the judge in his English case who remarked "that these sailors who put the boy to death ought rather to die themselves," I would like to remind him that in this case the comparison will not avail at all; why the doctor should kill himself I do not understand. The mother and the doctor stand in a different relation to the person who was to be executed than did the sailors to their comrade.

As to the point made during the discussion, that criminal abortions are largely restricted to the ignorant, I would say that it always has seemed to me that the ignorant servant girls learn it from their mistresses in their contact in every day affairs, and then practise it before and after marriage.

As to letting a tubal pregnancy go to the end, I would regard that as criminal, to say the least.

Dr. Harrington: In the discussion of this subject some years ago a professor of obstetrics stood before a medical society and stated that he would just as lief kill the fetus within the womb as kill a rat. We have, from the

opinion of that man and the stand taken by that man, all grades of opinions up to the position which I take. I have laid down a principle which cannot be controverted, and that principle is this, that you cannot directly take the life of an innocent person and be justified. No one who has disputed me has disputed the correctness of that principle. I do not think you can argue around it. Now, the man who justifies the production of abortion in pernicious vomiting will also justify the killing of that boy on the boat, because they would all have died had they not killed him and lived for four days on his flesh; and you would naturally say that the lives of the two men who had families at home were of more importance than the life of that boy who lay helpless and exhausted on the bottom of the boat.

Again, the man who disputes my position must say that the captain of the vessel is right, when the plague breaks out and one is stricken down incurably with the plague, if he orders that man thrown overboard to save others. If you hold to that position you must justify the physician who says, because a woman has an incurable cancer and has six or eight months to suffer untold agony, that you are justified in shortening the term of her mortal existence. I do not believe it. I believe that the right of life lies not with you nor with me, neither with the father nor the mother.

One word regarding pernicious vomiting: Men have said that they have performed that operation once, twice or three times, because it is the only thing that would save the life of the mother. How do they know it? I saw a case not long ago in which four men told a woman unless an abortion was performed she would die of pernicious vomiting. Both the mother and child are alive to-day. If the judgment of the first, second, third or fourth man had been taken, the child would have been destroyed and the mother would probably be living; but I say that you have no right to make that decision; there are other means that you can use; you cannot directly take the life within the womb and be justified in so doing. You may do this: we know that sometimes by digital dilatation of the cervix we get a cessation of the vomiting. You may dilate the cervix if absolutely necessary. That does not necessitate an abortion. In so doing you are not directly attacking life.

I want to say to my theological friend on this side of the room that he mistook my position. I said nothing about the unjust aggressor. I do not think that the doctor would say for a minute that that innocent child in its mother's womb, who had no voice in going there, or getting out of there, can be classed in any sense as an unjust aggressor. If he is you are entitled to take his life, but in what way and by what rule of reasoning do you make that infant within the womb an unjust aggressor? You cannot do it by any method of reasoning you may evolve.

OSTEOSARCOMA OF THE HUMERUS.

WITH REMOVAL OF THE ARM, CLAVICLE AND SCAPULA. DEATH FROM SARCOMA OF LUNG NINE MONTHS LATER.*

BY L. H. PRINCE, M. D.,
PALMYRA, WIS.

A. W., a young man of nineteen years, of Palmyra, Wis., was referred to me by Dr. Keithley, April 9, 1903, for operation. I saw the case with Dr. Keithley a few weeks prior to this, at which time sarcoma was diagnosed and operation advised and rejected. The patient's mother died when 50 years old, of tuberculosis; a sister was operated on for some abdominal tumor six years ago, and a maternal uncle died of brain tumor after three years' illness.

Patient never had any serious illness until his present trouble began, and was always of average strength. Three months before any swelling or pain occurred he played ball without any trouble, and at that time appeared in good health. The latter part of January, 1903, that is, less than three months prior to operation, after pitching wood for an hour, from a sawing machine, he had some pain in his right elbow, which persisted for two or three days. He noticed, when rubbing his arm, an almond-sized swelling at about the middle of the posterior surface of the arm. This continued to enlarge, as also did the entire arm, and he saw Dr. Keithley for the first time Feb. 23, 1903, about one month after the first evidence of trouble. On Feb. 30th, another swelling was noticed at the lower anterior portion of the arm, which was tender on pressure. The arm enlarged rapidly and the pain, especially at night, grew more severe. During the month of March the whole extremity rapidly enlarged, the patient lost flesh and strength, and there was an increasing amount of pain.

On admission to the Palmyra Springs Sanitarium, April 9, 1903, not more than ten weeks following the first evidence of trouble, patient was weak, emaciated, mentally depressed, and suffering much pain. His temperature was 99.8 degrees and pulse 112. Urinary analysis negative. Blood examination at this time showed 5,000,000 red and 26,000 white corpuscles. There was a general enlargement of the right upper extremity, there being a difference of six inches in circumference at different parts between the right and left extremities. Morphine was frequently required to relieve pain. At this time no evidence of disturbance was discovered elsewhere.

*Read before the Central Wisconsin Medical Society, Madison, July 26, 1904.

On April 11, 1903, I operated, with the assistance of Dr. George Keenan, of Madison, Wisconsin, and Dr. Keithley, of Palmyra.

The arm was only depleted of blood to the extent possible by elevation of the extremity, bandaging not being resorted to. The Paul Berger interscapulo-thoracic amputation was done, the entire upper extremity being removed with the exception of the inner third of the clavicle. After removal, by the Gigley saw, of the middle third of the clavicle, the subclavian artery was easily tied with a catgut

ligature, but owing to faulty technic some delay was experienced in the ligation of the subclavian vein. With the exception of that escaping from the engorged extremity, little blood was lost. The patient's condition remained fairly good until after the severance of the brachial plexus, when he became almost pulseless, and it seemed as though he would not rally from the great shock. At the completion of the operation 500 cc. of normal salt solution was injected hypodermically in the groin, and the same amount placed in the rectum. The lower extremities were bandaged, and the patient placed in a warm bed.

Twenty-four hours after operation patient had rallied nicely, temperature 100.6 degrees, pulse 128, and was feeling comfortable.

After forty-eight hours the temperature did not rise above 99.5 degrees, the pulse gaining in strength daily. He was sitting up on the third day and made a satisfactory convalescence, the wound healing primarily. The stitches were all removed on the 10th day, and the patient went home April 27, sixteen days after operation.

Forty-eight hours after operation blood examination showed 3,500,000 reds and 8,850 leucocytes. The amputated extremity weighed 17½ pounds. The extremity was sent to the Pathological Department of the University of Chicago, and Prof. Hektoen made the following report:

"The axillary and subclavian lymph glands, as far as they accompanied the specimen, were enlarged, soft and red.

"Axillary and subcutaneous veins thrombosed, and much edema of the subcutaneous tissues.

"The large swelling below the deltoid was formed by a large cyst, whose walls were made up by the muscles and fascia, and its content, a dark red fluid, that seemed to be nearly pure blood. Beneath the belly of the biceps was a small cyst containing about 60 cc. of a similar fluid. The large cyst contained 450 cc.

"Both cavities reached inward to the bone, which formed part of their wall.

"The upper half of the humerus, as high as the surgical neck, was very abnormal, especially the posterior and lateral surfaces. In one place the bone would be badly eroded and honeycombed, while immediately adjoining that there would be outgrowths as large as a walnut. These bone outgrowths were quite hard and nodular. There were also masses of pulpy consistence extending out from the bone, but even these generally contained bone spicules.

"Microscopically the pulpy tissue attached to the bone is of the structure of a myeloid sarcoma. It consists of a ground work of spindle cells, surrounding which are many multi- and uninuclear giant cells.

"The muscle forming the cyst wall showed many degenerate changes, but in the sections examined no tumor growth was found.

"One of the most suspicious of the subclavicular lymph glands near the clavicle was cut up, and sections from several parts examined, but no sarcoma elements were found.

The thrombosed vessels, and the muscular tissue that was examined showed no evidence of sarcoma.

"Diagnosis: Giant cell sarcoma of the humerus, with formation of blood cysts. Simple hyperplasia of regional lymph glands.

"The absence of sarcoma cells except in the local growth is most encouraging, but it must be taken into consideration that but a minute mass of the surrounding tissue and lymph glands could be examined microscopically. However, fortunately, this type of sarcoma does not seem prone to metastasis.

"The humerus is preserved in the Pathological Museum of the University where it can be seen at any time."

After leaving the Sanitarium patient continued to gain in strength and weight, and general health, until June 1, 1903, about two months after operation, when he complained of some pain in the right chest, anterior and posterior, opposite the 4th and 5th ribs, and coughed a little. The scar was not tender, nor was there at any time any appearance of abnormality. A little later he began to have some difficulty in breathing, but his general health remained fairly good. Four months after operation his health began to fail, his cough grew worse, there was a large area of dullness in the right lung, and from this time on he failed steadily. He died Dec. 7, 1903, eight months after operation, and ten months after first appearance of trouble in his arm.

No autopsy was allowed, but it is presumed that he died of sarcoma of the lung.

USE OF DRUGS IN LABOR.*

BY J. F. FORD, M. D.,
OMRO.

The aim of this paper is to present a brief resumé and at the same time invite discussion of the subject of "Use of Drugs in Labor." A prominent gynecologist and surgeon of this state recently made the statement that ergot was at the present time quite extensively used during labor, and that its misuse was accountable for a very large per cent of necessary operations for repair of injuries to the floor and pelvic organs of the female patient. This statement, although a somewhat startling one, has, in the main, been justified by the replies to about 100 letters addressed to general practitioners in the rural districts and small towns of this state. Nearly

*Read at the 58th Annual Meeting of the State Medical Society of Wisconsin, Milwaukee, June 23, 1904.

*Before reading his paper Dr. Ford said: I am about to make a somewhat liberal use of replies to letters I directed to my fellow-practitioners. I do not do that in a spirit of carping criticism, or fault-finding, or difference of opinion from those gentlemen. The letters were written and answers received in order to aid me in preparing a paper. I sincerely thank the gentlemen who replied to the letter, and I say that I am endeavoring to express no personal difference with any gentleman who was courteous and kind enough to reply to letters of inquiry. I also hope that the society will absolve me from the charge of bringing before it a subject so old, thread-bare and possibly of small interest, because as we proceed to the discussion I hope I will be justified in presenting the matter.

50 per cent of these replies indicate that ergot is used during the first and second stages of labor.

When it is remembered that the weight of medical authority is almost, without exception, against such use of the drug, it would seem that discussion of this subject is timely, if not a necessity.

It might be well at this point, in the interest of fairness, to admit that the general practitioner doing obstetrical work in the rural districts, will find it well nigh impossible to follow technic endorsed by the specialist who does his work in a well appointed hospital, or in large cities where he may surround himself with all modern conveniences and skilled assistants. It should be remembered that practical obstetrical therapeutics is a matter very largely of environment and powers of personal adaptability. Again, to the rural practitioner laboring under the stress of limited time, fatigue, and pressure of other work, there is a great temptation to resort to any means which to him may seem safe in expediting labor. Doubtless it may be further urged that under the present state of modern civilization there will be found in the large majority of cases, such deviations from the normal as to give clear and positive indications for the use of drugs, and it is at this point that the skill, judgment and tact of the practitioner is tested.

Much has been written on the use of drugs in this condition, but the opinions differ widely, the theories advanced are not in accord, and the results obtained are not uniformly satisfactory, while statements as to the merits of different drugs are very contradictory. These conditions probably arise from (1) the fact that the use of any drug at this time is, to some extent, a matter of individual selection as regards the personal idiosyncrasy of the patient; (2) the fact that the methods of administration vary widely and the indications are not carefully observed: and (3) that the drug used may be unreliable or even inert.

Among the indications given for the use of drugs at this time are, (1) the relief of pain, (2) to properly facilitate and expedite the progress of labor, (3) control of hemorrhage, (4) the prevention of injury to mother and child by precipitate labor or too forcible uterine contractions, and (5) the prevention of sepsis. In meeting these indications there is found among the leading teachers the very widest differences that can be found on any subject in the whole field of medicine—ranging from Price, of Philadelphia, who emphatically condemns all drugs, to many good authorities whose list of drugs is almost legion.

Pain during labor may demand attention either when as a prodrome of real labor it is associated with the slow and tardy dilatation of a rigid os, or when the head of the fetus is too rapidly dilating the perineal tissues. In the former condition opium in some form seems to have the preference and chloroform is condemned. Opium and belladonna (ââ gr. 1) are recommended by several good authorities. Several cases showing the beneficial effects of antipyrin in overcoming the condition above mentioned are reported. The drug was given as an enema of half a dram or in dose of 20 grains by the mouth. The reporters claimed that pain was very promptly and greatly diminished and the labor progressed speedily. While pain was relieved and the os softened, the uterine contractions were in no degree diminished. Chloral at this time holds a high place in the estimation of such men as Haehnlen and Hopkinson of Philadelphia, and Polak, Broadhead and Dorman of New York. The favorite method of use is per rectum in 15 to 20 grain doses. Drs. Boyd, Wilson, Hirst and Price of Philadelphia, condemn its use. Gelsemium and belladonna have been recommended by some obstetricians as tending to overcome the rigidity of the os, but so far they have not come into general use. Cocaine as an ointment has been advocated, but either its well established bad reputation in other directions, or its failure at this time, have prevented the profession from accepting it.

For the relief of pain under the second heading—during the stretching of the perineal tissues—common consent seems to yield the palm of excellence to chloroform. The majority, however, stop its use far short of surgical anesthesia, while a few authorities believe its use conduces to post-partum hemorrhage.

Perhaps in no instance in the whole domain of obstetric practice is there such a wide difference of opinion as to the efficacy of quinine as an oxytoxic. Some of our most eminent obstetricians sound its praises with no uncertain voice, while others equally prominent deny that it has any value at all as an oxytoxic and emphatically condemn its use. It would seem from a careful weighing of the evidence that the general trend of medical opinion to-day is to regard its so-called oxytoxic properties as arising solely from its value as a general systemic tonic and nerve stimulant; and the same must probably be said of all or nearly all of the other so-called oxytoxics.

The users of quinine compose a long list of eminent men—Alfred Smith, M. H. Fussel, Haehnlen, Davis and Hammond of Philadelphia, Fordyce Baker, Edgar, Polak, and Broadhead of New York; while it is condemned by Hopkinson, Wilson, Hirst and Price. Dr.

L. J. Hammond of Philadelphia, in the *American Journal of Gynecology and Obstetrics,* reports observations on 100 cases, and concludes that quinine does exert marked expulsive effect on the uterus and decidedly tones the whole muscular system. It also lessens the danger of septic infection. M. H. Fussell of the University of Pennsylvania, in a thorough discussion of quinine in the *Therapeutic Gazette,* January 15, 1901, concludes, after using the drug for years as a routine treatment, that it has most decided value in uterine inertia and during the second stage of labor, but should not be used before dilatation is complete, or well advanced. It does not act like ergot but simply accelerates and intensifies the regular contractions. It is best given in solution. It does not produce post-partum hemorrhage, but rather tends to prevent it. He has never noticed any tinnitus as claimed by some other authorities. He mentions as contraindications— idiosyncrasy, middle ear disease, or any other cerebral involvement.

For the prevention of hemorrhage only one drug seems to occupy prominence, viz.: ergot, and while a few good obstetricians condemn it, the majority seem to favor its use, but only as a post-partum measure. No recognized authority has been found to justify its use until after the completion of the third stage of labor—or at least it is not given so that its effect can be felt until the placenta is safely delivered, and the uterine cavity is empty. But in spite of the unmeasured and unanimous condemnation it is receiving by all leading obstetricians, there is, as shown in the beginning of the paper, good reason to believe that in certain localities its use during one or more stages of labor is still continued. The foregoing statement may justify the repetition of the principle, that ergot should never be used in any stage of labor. The long list of accidents charged to its account: its well known (clinically) property of inducing tetanic contractions of the uterine muscles whereby it has caused rupture of that organ or death of the fetus in utero, if given before dilatation has been completed; or sudden expulsion of the contents of the uterus with extensive lacerations of both uterus and perineum, if given after dilatation of the os has been more or less complete; the utter impossibility of always being certain of the potency of the preparation used; and, finally, the fact that, up to the present time, its active principle or alkaloid has not been discovered—all these objections make it extremely doubtful if a single authority of repute can be found to sanction its use as an oxytoxic to the exclusion of other more certain and far safer remedies.

It seems to be a well recognized fact that quinine will not incite uterine contractions, but according to Hammond—in the list of 100 cases before mentioned in this paper—it does apparently very materially increase the force of contractions when once they have begun. It is also noticed that quinine more often fails as an oxytoxic in the case of strong, vigorous primiparæ. It also has failed as before stated, when the os is not well dilated or is in a state of rigidity. In three cases noticed in the practice of the writer, where the patients were positive the term of pregnancy had been completed but were mistaken, the use of quinine failed either to strengthen the slight uterine contraction, or to induce labor, and the pregnancy continued for fully one month longer.

In regard to the fourth indication for the use of drugs, the prevention of injury to the mother and child by precipitate labor—two drugs have been mentioned, namely: opiates in some form, and chloroform. Opium has been mentioned above.

The use of chloroform in obstetric practice so far as can be determined from the leading specialists of to-day, when used for this purpose is carried to the surgical degree of anesthesia, although it has been shown by some observers that often a very slight degree of anesthesia in many cases lessens the force of uterine contractions. A few authorities charge chloroform, like quinine, with tending to produce post-partum hemorrhage, and judging from a number of cases that occurred in my practice, it seems that some weight should be given to this caution in the case of chloroform, especially where the drug has been exhibited for some length of time. Some objections are being made to the use of chloroform at any time in labor before the os is perfectly dilated, and the head is pressing upon the perineum. So far as the investigation of the writer goes, no deaths have occurred from the use of chloroform in labor.

According to Polak of New York, and his associates, Broadhead and Dorman, ergot used immediately following the delivery of the placenta, by inducing contraction and retraction of the muscular fibers of the uterus, is of decided benefit in diminishing the dangers of sepsis, and notably the former is followed as a matter of routine practice; while by Hammond and Fussell, quinine is used for the same purpose.

We may then summarize by saying that (1) there is a tendency among obstetricians—both teachers and practitioners—to use fewer drugs during labor, and to be positive as to their indications, their preparation and reliability. (2) That the use of ergot, even at the

present time, seems to be justified by quite a number of general practitioners, a recent instance being cited in a late number of the *Journal of the American Medical Association*, and which was promptly condemned by the editor. (3) That such use of the drug is not in accord with the teachings of the leading obstetricians of the country, and that its only safe place is as an hemostatic and indirect post-partum antiseptic. (4) That quinine and other so-called oxytoxics depend for their beneficial result upon their action as general nerve stimulants and muscle tonics, and the many unsatisfactory results noted, probably arise from failure to recognize these properties and to observe the proper indications for their use. (5) That the exigencies of rural practice render it certain that drugs will be used, and the general practitioner should endeavor to be more certain of the indications and the reliability of the drug, both as to potency and preparation.

Discussion.

Dr. H. B. Sears, of Beaver Dam—I am afraid I can do little more than endorse what the doctor has said in his interesting and timely paper—timely, certainly, if any such extensive and improper use of ergot prevails. I have not used it myself for several years, and had thought it had been generally dropped.

The absence of ideal conditions necessitates efforts at correction. Enfeeblement of the digestive tract, and lagging emunctories, eventually result in a systemic condition in which the nervous and muscular systems are lacking in tone or fitful in action. When these faults exist, our time for remedying them is, often, very short.

In the cases in which our assistance is most demanded, we may find the general tone of the system much below par. There may be heart weakness from organic lesion or from fatigue, or uterine action from faulty development, fatigue or overdistention, as in hydramnia; in which last condition, relief of the overdistension would need our first attention, before thought of stimulating uterine contraction.

Our choice of remedies, it seems to me, should be influenced by the degree of control we might have of their effects, or our ability to counteract excessive action. In the first stage of labor, with irritability and tardy dilatation, morphine has seemed to give comfort, without interfering with the progress of the case. Chloroform, at times, is also very useful, exhibited *cautiously* and *only* from the beginning of each uterine contraction, and continuing it to a period of little beyond the climax of the pain. It should be given only when the contractions are of average vigor or above, and when the general tone of the patient is good. Chloroform I think much preferable to chloral, inasmuch as the effect or dosage is more under our immediate control.

For the purpose of improving general tone, as well as regulating and strengthening uterine contractions, I have found quinine, strychnia and digitalis of great service. If uterine contractions are too frequent or too vigorous, either naturally or from over-stimulation, chloroform, given as before

stated, is our best antidote and safeguard against injury to the parturient canal.

In instrumental cases I do not believe chloroform should be given until the forceps are applied and have been once closed, in order that we may be sure that no tissues of the mother are included in their grasp. If one is not dexterous enough to apply instruments without causing the patient severe pain, he is certainly not safe to apply them under chloroform.

Dr. G. J. Kaumheimer, of Milwaukee—A great many times the use of drugs or the effect of drugs in labor, as in other diseases, is obscured by the natural evolution of a disease process, or in case of labor, the physiological process. Because we give a dose of some drug and the pains then become stronger it is not logical to say that the relation is one of cause and effect; that fact makes it very difficult to estimate properly the value of the use of oxytoxics. The German midwife likes to steam her patients. She puts chamomile in a slop pail of boiling water and makes the patient sit over it, and very often this is claimed to be efficacious. Even the act of labor is strongly under mental influences. We know that the arrival of the physician will often cause pains which came tumultuously, to settle down and the patient becomes more quiet. Instead of having one continuous pain the pains come every 4, 5, 6 or 8 minutes, and seem to be more effective; and for that reason, in the use of oxytoxics, even ergot or quinine, it is very difficult to estimate their exact effects. I have occasionally used ergot in small doses (15 drops), when there was a well dilated os and the pain seemed to be lagging because of uterine inertia. In quinine I have been disappointed. Strychnia given in doses of 1-30th grain, and repeated in two hours, sometimes appears to have a very good effect at the beginning of labor, when the pains are slow. When the woman is nervous, agitated, and worried, a hypnotic dose of morphine, or some other opium preparation, or of chloral, sometimes works wonders. The patient may often go to sleep—at least the nervous agitation disappears and the nature of the pain changes. The question of the administration of chloroform beginning early in labor and with every pain, is a matter of environment. In the summer time if we have a large room and it is daylight with good ventilation, it can be done. But if a doctor start in, in a small room, with himself and probably the husband and one or two neighbors present besides his patient, with poor ventilation and the lamp burning, the whole crowd would probably have a bad cough in an hour or two. You must remember that chloroform vapor exposed to an open light, such as the light of a lamp or gas light, produces a very irritating vapor, and I have seen cases where women after confinement suffered from bronchitis which did not exist before, probably due to decomposed chloroform vapor.

Even later, when pains which once have become vigorous, have suddenly without apparent cause become less vigorous, perhaps even dying away, becoming mere remnants of themselves, the administration of some food, such as a cup of broth, will influence the proper renewal of the pain. We too often forget in tedious labors to see that the patient takes a little food, which will, as I say, sometimes start the pains up again; and if it does not, the administration of an opiate to allow the exhausted muscles to gain tone, will work wonders.

In regard to applying forceps when the patient is awake, I have not the grit to do it. Many patients have a horror of them. They have understood from some vague source—it is generally traditional among the female sex—that instruments are a butchery and terrible, and it is just as well not to let the poor woman know what you are going to do. If her husband, the mother and the relatives are satisfied, and if you want to consult them, do so; then at the beginning of a pain give her chloroform and continue it until you have proper anesthesia; then you will save her at least the horror of the anticipation, your anesthesia will be more quiet, and you will obviate the danger of having her jump up when she is half anesthetized, and perhaps impale herself on the instruments, as in a case reported from New York.

Dr. Hugo Philler, of Waukesha—I would just as lief go to a case of confinement without my scissors as without my chloroform and mask. Many of my patients know this, or one tells the other "you get that doctor, he gives you chloroform," and it is my belief that chloroform works exactly like the Pacquelin cautery works in neurasthenia by burning on the back; it acts in the way of moral suasion and suggestion. In the second stage of labor I generally give the mask into the hands of my patient; I put on a few drops of chloroform, say 5 to 10 drops, and it has a "wonderful" effect. The woman holds the mask in her own hands, applies it to her nostrils and mouth, and I tell her to breathe as much as she can and she does not show any pain. I believe we should reduce the pangs of labor by this *suggestive* treatment and give chloroform in all cases of labor.

Dr. G. A. Heidner, of West Bend—The greatest difficulty we experience in the application of drugs in the treatment of diseased conditions, is in observing the exact indications for these drugs under particular conditions. I believe that if obstetricians were more careful as to the time of employing the drugs in the particular condition which they are trying to remedy, there would not be so much disparity of opinion as to the effect of drugs in labor cases.

I have learned a few things in the practical application of drugs in labor which to me have been of great value. I used ergot very frequently in my early obstetric experience, but now I never use it in labor. I have not seen any indication for the use of ergot in labor in about 10 years, *i. e.*, any indication that could not be met as well or better in some other way.

Morphine I formerly used very little; now I use it quite often. For me there is one particular indication for morphine in labor, and this occurs almost exclusively in primiparæ. If I am called to a case of labor and find that my patient is a primipara, and has had pains for 3 or 4 hours, or perhaps all night, and find there is practically no advancement—probably the os is dilated to admit only the index finger and forms a firm ring, hard and unyielding, and the patient is becoming exhausted—I give her a hypodermic of morphine and atropin, a comparatively large dose; I tell her that she will get a few hours of sleep, or at least rest from her pains for 4 or 5 hours, and that when her pains recur labor will progress more rapidly and her suffering will not be so intense. I have had cases of that kind, not one or two, but dozens of them, send for me after an interval of from 3 to 4 hours, may be a little longer, and find that the patient has had pains for half an hour, and find also that the os is fully dilated, the bag of waters is

pressing firmly on the perineum; the patient has had no suffering in the meantime, and labor has progressed to my notion much more rapidly than it would if I had not given the morphine.

In my early obstetric experience I occasionally used chloral, but I do not like it, because if it is given by the mouth the average patient will vomit; if it is given per bowel it will be expelled during the pains—this at least has been my experience. With me morphine takes its place, and takes it much better.

Quinine is used considerably. I restrict its use almost exclusively to women who have had a goodly number of children and are nearing the climacteric. Many of these have irregular pains recurring every two to fifteen minutes; there is an excess of liquor amnii; the uterus and abdominal walls are flabby and the os is thick and soft; the child floats about in the uterine cavity and even during the contractions there is no appreciable pressure on the soft, but slightly patulous os. Fifteen grains of quinine will make a great change in from two to three hours.

Dr. Ford (closing)—I wish to thank the gentlemen for the interest taken in this subject. I have used chloroform in my own practice, both with and without the use of forceps, as has been suggested.

There is one thing that physicians, I think, are too slow to recognize, and that is the power of suggestion. I did not mention that in my paper—I thought probably it would be brought out—but a prominent physician of this state once told me (the gentleman is present here to-day), that being caught out in the country with a tardy labor and no quinine, and having some very nice looking subnitrate of bismuth with him, he prepared a good strong powder, gave it to the patient, and told her that in such and such a time she would find her labor very much accelerated and her pains very prominent, and it had the desired effect just the same as the quinine.

In regard to the use of forceps, I confess my experience has been at variance somewhat with that of Dr. Kaumheimer. My patients are nearly all country people; I do not know that they are any less or more intelligent than the doctor's patients would be, but I know that a very few words of assurance and a little finesse and tact on the part of the man who is going to do the work, will avoid the difficulty that the doctor suggests. In fact the applying of forceps, it seems to me, with a man of ordinary skill, should not be a formidable operation, unless it is what is called a high application, and I very seldom use the forceps in that way, without full anesthesia.

There is one thing noticeable, however, that the patient who has once had chloroform during this terrible ordeal is pretty apt to make it uncomfortable for you if you do not give it next time, and as a gentleman has said, it rather enhances the reputation of the doctor who uses it. They want the doctor to make it easy for them if he can, and if there is ever a place on this earth where a doctor should step in and make things easy for a patient, it is at that time.

REGARDING THE LACK OF PROGRESS IN SCIENTIFIC THERAPEUTICS.*

BY E. L. BOOTHBY, M. D.,
HAMMOND, WIS.

In calling your attention to this, by many of us a most neglected subject, therapeutics, a word of explanation is necessary. It was my intention to cover the ground historically, as well as otherwise, but as an article on the past, present and future of therapeutics is to be presented to you at this session, I shall confine what I have to say more to one particular phase, the principles of therapeutics, which originally I had intended to barely mention.

Thirty years of continual work in the harness, instead of making a therapeutic nihilist of me has had rather the opposite effect. At my time of life a man has either become a Rip Van Winkle, so happily described by our late brother Oliver Wendell Holmes, a nihilist, utterly without faith in drug medication, or he has a positive belief and trust in something besides the knife and the trained nurse; something he has learned in many a hard fought battle with disease, and which tested as by fire has purified and freed from empiricism and dogmatism, and left the pure gold of a ripe experience as his vade mecum for the future.

Therapeutics is far behind other branches in the advances made in the past twenty years. The young doctor just entering on the practice of his profession, is far better equipped in everything else, than with the weapons he uses in his encounters with disease. Owing to the mass of worthless drugs, the quantities of obsolete rubbish furnished by "Mr. Materia Medica" and the opinion so frequently expressed by many of his teachers regarding the unreliability of drugs in this or that disease, he comes to the battle with doubt and hesitation, with an armamentarium obsolete and out of keeping with the strides of progress made in the last decade or two in other but not more important branches. In fact, he has been taught by the let-alone-system and is one of that increasing number of therapeutic nihilists whose doctrines have been handed down to us for a generation or more. The study of scientific therapeutics has been neglected in the large hospitals of Europe, and in America in those institutions under the influence of old country teachers.

The rights of a sick man in a European hospital are small indeed. The professor is a despot, and he only asks of the patient, that he

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present himself on the post-mortem table in due season, that he may demonstrate to his admirers his accuracy in diagnosis. The desire to actually do something medicinally for the patient rarely comes from your great man. He is concerned chiefly with etiology, pathology, and diagnosis, and as therapeutics is a neglected study, the unfortunate patient suffers for a rational treatment. The life or death of the average hospital patient is a matter of utter indifference to the great majority of the hospital staff, and it is to these that we are wont to look for advice and from whom we so often hear the phrase, "there is no virtue in drugs." I protest in the name of thousands of general practitioners against this growing scepticism. The country doctor's success (a general practitioner by force of circumstances) depends entirely on his results, on his ability to relieve distressing symptoms and cure disease. He who uses his therapeutic resources correctly obtains the best results, and the true user of these resources is more often the general practitioner than the scientific investigator.

During the last half century our knowledge of pathology has been greatly advanced. The extraneous causes of pathological conditions (bacteria, parasites and the like, as well as self-infection), have been most thoroughly investigated as factors leading to structural changes in the various diseased organs of the body. We all admit that a knowledge of pathological anatomy must form the foundation of our education. The question is, has not the study of structural disease changes about accomplished its work, and will not the study of the future be, for both specialist and general practitioner, not so much the pathology of structure, as the pathology of function?

Life is a struggle for existence; unknown forces attack on every hand. Were this not the case there would be no such thing as perversion of function. The power of resistance implanted by nature has under unnatural conditions of life, been weakened, and when the organism becomes invaded the functions are perverted. The reaction which always occurs in living organisms when invaded by disease germs is protective to life and function by its very nature. The chill, the fever, the pain (reaction), is the vis medicatrix naturae caused by the effort of the organism to drive out the invader. The same cause invading the system always produces the same condition, disorganizing the normal equilibrium in the same manner, causing symptoms of disease so-called, and by their study we recognize them as belonging to classes or groups, hence comes our ability to diagnose.

A careful, thorough study of disordered function is essential to a correct diagnosis. Two factors are always necessary to produce disease. First, an extraneous ultimate constituent; second, the power

of resistance inherent in the individual. If the power of resistance is sufficient, the disease is aborted by natural means. If not sufficient to expel the extraneous element from the system, disease is the result. This is made evident both objectively and subjectively by reactive phenomena. Scientific therapeutics is, therefore, the necessary aid given the insufficient resisting power of the economy to eliminate the invading cause. In order to accomplish this, two things are necessary: First, ability to judge accurately how far unaided nature can succeed, and when and how to intelligently assist. Second, to remove from the path of the resisting power all factors that act obstructively.

In order to succeed here the natural powers of resistance must be studied and understood, when we are ready to inquire how and with what weapons we are to accomplish this result. Its success depends on our ability to imitate nature. It has been estimated that four-fifths of all diseases depend on functional pathological conditions and are cured or aborted by this vital resistance without aid, hence it will be readily seen that the actual aid to be given, compared with the amount of disease, is inconsiderable.

The method of invasion by disease, while a subject of interest and importance, is without the province of this brief paper, which merely attempts to lead up to the subject of why, how, and what to prescribe.

I am inclined to the belief that progress has been made much more rapidly along sanitary and hygienic lines, than along those of drug medication. The purely scientific man is often a sceptic, and his influence has permeated the profession, and outside of proprietary medicine and the overweening pecuniary ambition of would-be manufacturing pharmacists, but little advance, comparatively, has been actually made in the past two decades in rational therapeutics. For centuries all drugs were used empirically, and the first halt called—the first attempt to check empiricism, the first real advance toward the scientific use of drugs—was made by Hahneman and his homeopathic adherents. While their drug provings were crude and unreliable, owing to the nonelimination of the personal equation, to them undoubtedly belongs the honor of the first advance. But a better basis was soon had, one upon which we could depend with more chance of success, when the lower animals were used as subjects of experiments. However, experimental and clinical therapeutics only became of accurate value when the active principle of the drug was substituted for the formerly employed crude mass. The first active principles to be isolated and studied, were morphine in 1816, strychnine in 1818, quinine in 1820, aconitin in 1821, and atropine in 1823, since which

time the active principle of almost every known drug has been isolated and its physiological action determined; these active principles are now in the market in a state of purity in granules of minimum doses, accurately measured—easily carried, pleasant to take, rapid and specific in action, and are now being used by more than 30,000 physicians with unvarying success.

Following the isolation of the active principles came the analytical study of their chemical constituents, which led to the synthetical composition of active principles.

In the crude drug no accuracy of dose is possible, and even in the assayed fluid extract, accuracy of dose is only approximated and that in but one of its perhaps many alkaloids, because of ignorance of the amount of active principle contained therein, or the preponderance of the one over the other, when two or more are contained in the same sample. Instances of fatal effects from the use of some of the best known preparations on the market are of sufficient and frequent occurrence to make us pause when about to prescribe, for instance—fluid extract of pilocarpus, containing two leading but antagonistic principles, pilocarpine and jaborin, the one increasing the saliva, milk and perspiration, a vasomotor relaxant, and the other decreasing the same secretions, and having an effect directly opposite. Many of the best known vegetable drugs contain more than one active principle, and their therapeutic effects depend on the preponderance of one alkaloid over the other.

When we know the physiological action of the active principle, supplemented by sufficient clinical experience, we should, nay, must know what the effect will be when the drug is exhibited. I previously stated that a knowledge of pathological function is absolutely essential to a rational and scientific therapy. The increase, decrease or arrest, of normal function result in disease. Then, given a drug known to have the property of decreasing, increasing or arresting this function, we should be able to restore the economy to its normal equilibrium.

Several functions may be acted on by the use of one drug through the agency of the vasomotor system. Action through this system is a most potent means of relieving diseased function. In order to succeed, reliable drugs are required. Single drugs, as a rule, are to be exhibited in small and frequently repeated doses until enough is given to produce and maintain the desired effect. The fundamental law in prescribing active principles is accurately measured minimum doses, repeated at such intervals as necessary to secure and maintain the desired effect. This is the law of alkalometry, or dosimetry, as

it is often called. By its use, more scientific therapy, I believe, is possible than by the use of galenicals which deals with uncertainties, asks the diseased economy to do double work, to act as a chemical laboratory (when necessarily in poor shape to act) and then absorb its products as well as eliminate the crude inert mass in which it is exhibited. An accurate prescription will only follow an accurate diagnosis. Nomenclature is not sufficient. The pathological condition of the cells and tissues of the diseased organs must be diagnosed and an intelligent idea of the disease must needs be followed by an exhibition of the remedies always indicated by the morbid symptoms. The active principle is the rifle bullet, the crude drug is the old smooth bore shot gun, using which you turn your head, shut your eyes, blaze away.

When a perfect knowledge is obtained of the pathological condition present in every disease, and when it is definitely determined what are the effects of drug medication in such conditions, then, and not until then, will medicine become an exact science. This can never be until a united profession turns to the use of distinct remedies that have a uniform effect. As long as proprietary compounds of unknown composition, foisted upon an unwary profession by a lot of scheming pharmacists and would-be chemical companies, remedies of whose physiological action you have no knowledge and have no way to obtain it, and for whose clinical application you are indebted to a mercenary pharmaceutical prostitute, just so long, I say, as the medical profession leaves to the manufacturer the task of giving him the necessary tips regarding the clinical use of such drugs, just so long will rational and accurate therapy be retarded.

I have a far greater respect for the ignoramus, who, induced by the advertisements in almost every newspaper and magazine published, both secular and religious, purchases a bottle of Hartman's Pe-ru-na, or Lydia Pinkham's "Vegetable" womb lifter, than I have for the doctor who is supposed to belong to a learned profession—a literary, scientific, logical and rational being—and who prescribes compounds of whose physiological action, and of even whose composition he is as ignorant as of the pathological condition he is guessing at. No less reprehensible is he who lends his name to the promotion of any compound, no matter what.

The doctor's table is littered with chaff, his waste basket is full, the mail is loaded with them and the patients are literally drowned in an ocean of syrups and elixirs, and shot with pills, powders and headache wafers. "Soak-'em's Sarsaparilla," recommended by a score of college professors—who knows its composition? "Skin-'em's Anti any and every old thing," recommended by the eminent "Dr. Popin-

Jay" for that "Tired Feeling," from the laboratory of the "Do-'em-up Drug Co.," of "Quackville," out upon such! Let us be worthy members of a noble profession and not prostitute the name of physician, or quit.

The army and navy of the United States are supplied almost entirely with proprietary prescriptions, the larger part of which are a lot of useless water, alcohol, sugar, cellulose, and the like. I can carry in my vest pockets more medicine in better shape, for immediate use and positive results, than the best span of mules owned by Uncle Sam can haul down hill of the antiquated useless proprietaries used in the United States army to-day.

Isn't it about time a halt were called, a penitential retrospect made of drug therapy, a revolution started, a weeding out of false and erroneous methods, a conversion to the truth, planted by a never erring law in the vegetable, animal and mineral kingdoms?

I believe a revolution in medical science and practice will take place when proprietary medicines will be tabood by the learned profession; when the scientific and rational methods of the alkalometrist will be substituted for the obsolete and unknown quantities of the present and past; when one drug intelligently and rationally used will do the work impossible under antiquated methods. Alkalometry demands a keener study of disease, an accuracy in diagnosis, a certainty in prescription. The contest is on. It is up to the intelligent physician to look into its merits. Rip Van Winkle, M. D., will probably continue to use his "elixirpro." The pessimist and nihilist will continue with sugar pills and colored water and their expectant plans, but the enthusiastic progressive man, never satisfied with good enough, ever ready to "seize upon truth, where e'er it is found, on Christian or on heathen ground," will study, investigate and adopt the truths already proven, and go on and on in the good work. Alkalometry is not a system, not a school of practice, not a dogma or pathy or cure all, but a simple truth of science found among a mass of inert materials, a priceless gem waiting for its place in the crown of exact and scientific therapeutics.

In conclusion, I will state some of the changes necessary to be made toward a more exact therapy: First, a halt and cleaning out of the obsolete and useless and an abandonment of empiricism; second, a revised standardization, based on active principles as far as possible; third, a change in the instruction in medical colleges, abandonment of lectures on the subject, and laboratory work substituted, supplemented by clinical teaching in connection with diagnosis. As one writer puts it: "The college that can put a real live man (the strong

man of the faculty, not a 'supe' who simply backs up the star performer) into its chair of therapeutics, who will teach real, live modern methods of treatment, who will drop the uncertain, variable and dangerous medication of the past, and teach precision in drug applications, intelligent and energetic intervention by drugs, will be richly rewarded."

Discussion.

Dr. A. B. Newton, of Bangor—The doctor kindly gave me a synopsis of his paper by letter, and also kindly expressed the hope that I remained abreast of the times. I must acknowledge that I have not. During the reading of the doctor's paper I looked for the long beard and the Rip Van Winkle general appearance, and mentally I discovered them. I do not feel myself able to discuss this paper from the standpoint suggested and beg to be excused.

Dr. Samuel R. Moyer, of Monroe—I agree with most that the doctor said. It sounds to me, however, as though the doctor might be in coalition with a well known manufacturing house in regard to alkalometry—probably he is not. I merely wish to ask Dr. Boothby to explain what he means by alkalometry, whether he refers to that recommended by a well-known manufacturing house or not. I was under the impression that alkalometry had reference to a certain manufacturing house which advocates that system the same as it would any other proprietary article.

Dr. F. R. Weber, of Milwaukee—I was greatly shocked at the attack on colleges of this country, contained in the paper, and also at the attack made on our therapeutics. Alkalometry we read about cannot compare in therapeutic progress that is made and being made every day in this country and abroad. If you read the journals of physiology and experimental therapeutics and experimental pathology, you get some wonderful ideas in regard to the progress being made to-day along these lines.

For instance, take the subject of the treatment of the heart. We succeed now in taking the heart of an animal, a dog, out of its body, putting it into a moist chamber, and we can take the blood of that animal, defibrinate it, put it in two separate receptacles and have the heart pulsate for an hour and a half with blood flowing through the coronary artery; and we can study the effect of every one of the drugs we possess to-day; we can study the effect of digitoxin, digitalin, spartein, and besides that we can study the effect of the ice bag upon the heart; and I wish to state that the ice bag itself has become of such great importance in regard to the circulation of the heart that we can no longer afford to treat a single form of infectious disease without applying the ice bag to the heart; we know it will cause twice the quantity of blood to flow through the coronary artery that would flow through without its use; we know that digitalin and digitoxin contract the coronary artery and thus limit the supply of the blood to the heart, and we must overcome that difficulty by giving other drugs, or using the ice bag. I don't know what that has to do with alkalometry as we get it from Evanston, but it is practical therapeutics.

You may take almost any subject that we use to-day and you will find wonderful progress made. For instance, take salicylic acid, or any drug

that contains it, and we can give it for weeks and months and the kidney will not suffer from its effects. This is practical therapeutics, hospital therapeutics, and you ought to study it as well as we. Do not run down the hospital. The nurses of our hospitals have done more good for the prolongation of life than almost any one other factor.

Yesterday somebody in a supreme moment of intoxication said that 50 per cent. of the gentlemen of the medical profession here were abortionists. It was an awful thing to say. I say though, that 50 per cent. of the mothers to-day produce more crimes by not being able to nurse their little offsprings, or by possessing a foolish love for children who are sick, than any other one cause. Almost every first child that is lost, is lost by the inattention of the mother. You know, furthermore, that when there are sick patients in the family this foolish love prevents the patient's being brought to the hospital, especially in cases of appendicitis and gall stones. Three per cent. of cases of gallstones die when operated on, and sixteen per cent. die when complications arise. It is foolish love that causes so many of our patients to die at this period. I could go on and refer to a great many other things in which we have made large progress along therapeutic lines.

We forget too often that we are treating patients and not treating sickness. Take the subject of tuberculosis, and we know that 33⅓ per cent. of our patients to-day recover with rational treatment. This is experimental therapeutics; it is practical therapeutics, and there is not a particle of alkalometry in it; it means progress and it has largely come from your hospitals.

Dr. Boothby (closing)—In reply to the remarks of the gentleman who last occupied the floor, I may say I agree with him in general. I do not wish it to be understood that I do not appreciate and approve the modern American hospital, and undervalue the scientific work done there.

The lack of scientific therapeutics applies, I think, not nearly so much there as to the average general practitioner, who is not progressive—or at least not so progressive as he should be. But there is a chance for all to improve in their use of drugs, even in hospitals. You generally find the average doctor using the same old drugs, in the same old way he did 10, 20, 30 years ago; occasionally he tries a new one, but while he can use this means more skillfully, due to his experience, he is still empirical in their use and sticks to his galenicals and the practice of physics on the same old plan.

As far as alkalometry is concerned I have no excuses to make for it. I believe it's the most scientific of all therapeutic drug measures. I would always use the active principle and never the crude drug if possible, nor a tincture or decoction of a crude drug, nor a fluid extract even, for we have in the alkaloids a more accurate and reliable preparation than any other.

As I remarked in my paper I advocate no system, no pathy, no dogma, nor the product of any firm or manufacturing concern, my plea being the substitution of pure, unadulterated, reliable, active principles for the present unreliable mass of inert drugs on sale in the pharmacies.

The results obtained, when any at all are noticeable, are due to the active principle or principles alone, and as these are obtainable and are more accurate, more reliable, better by far for both patient and doctor, why not adopt them as a standard and use them as far as possible.

DIAGNOSIS OF EARLY ECTOPIC GESTATION.*

BY WILLIAM E. GROUND, M. D.,
SUPERIOR.

It is not my intention to present an exhaustive study of tubal gestation, but merely to mention those symptoms and signs which may serve to distinguish a pregnant tube from normal pregnancy and from the various pathological conditions found in the pelvis and lower abdomen, that are liable to be confounded with it.

Reference to the literature of the subject and the experience of other surgeons and my own gained in the observation and study of 18 cases upon which I have operated, gives me the unmistakable impression that in the diagnosis of ectopic gestation prior to rupture, we have a most difficult task. This must be apparent when we consider that normal generative organs probably do not allow the stay of the fecundated ovum in the tube, but presents an anomalous or diseased condition.

Since Albucasis in the eleventh century first noted the existence of extra-uterine pregnancy, and in the fifteenth century Jacob Nufer operated upon his wife for the same condition, the report of such anomalous forms of pregnancy have been frequent, but during the last twenty years much study has been given the subject, especially by Lawson Tait, Bland Sutton and others. In fact it was not until the modern surgeon entered the field that the true status of extra-uterine pregnancy was made manifest.

The frequency with which the growth of the fertilized ovum outside the uterine cavity occurs is variously estimated at from 1 in 500 to 1 in 10,000. There are reasons for this discrepancy. In the first place, our means of investigation and our diagnostic acumen are much improved, and our knowledge of pelvic pathology is such that a clearer insight into the origin of pelvic hematoceles leads us to believe that they almost always arise either from a tubal abortion or the rupture of a pregnant tube. Localities where gonorrheal infection is more prevalent, causing an alteration in the tubal mucosa, might account for a large number of cases. Suffice it to say that ectopic gestation is of sufficiently frequent occurrence as to command our constant consideration, for it is a factor that will often arise when the question of abnormal pregnancy comes up, as well as in the diagnosis of pelvic and abdominal tumors.

It is difficult to decide what is the active causative factor, but

*Read at the 58th Annual Meeting of the State Medical Society of Wisconsin, Milwaukee, June 24, 1904.

in all probability more than one exists, perhaps many. Among the etiological evidences that have been adduced may be considered inflammatory conditions in and about the tube. Pregnancy rarely takes place at all in active infective inflammations, so that it is inflammatory reactions of minor degrees, chronic and end results, that we would expect to find influencing the generative tract enough to allow fertilization of the ovum, but just enough to prevent its passage into the uterine cavity. Among other factors may be mentioned neoplasms, polypi and diverticula in and about the tube, peritoneal bands constricting the tube, puerperal atrophy of the tube, and the persistence of infantile conditions—small, tortuous lumen, atavism, reversion to lower developmental type, external and internal wanderings of the ovum and errors of the ovum itself.

Most text-books give the ages of 20 to 30 as the most prolific period for the occurrence of tubal gestation, but 75 per cent of my cases occurred between 30 and 40. The usual statement that tubal pregnancy followed a considerable period of sterility preceded by a normal pregnancy has held good. In all of my cases a history of abnormal generative function, and in most cases gross antecedent lesions, could be demonstrated.

The diagnosis of extra-uterine pregnancy before rupture is a most difficult matter because it may be simulated by a great variety of pelvic pathological conditions. The pre-requisite to establishing the existence of tubal gestation is, if possible, to establish the existence of pregnancy, because the subjective and many of the objective indications more clearly resemble uterine pregnancy than any other condition. While all of the signs of a uterine pregnancy may not exist, they are of sufficient prominence in the vast majority of cases to be strongly presumptive evidence. Perhaps in normal pregnancy the cessation of or the interference with the normal menstrual function is one of the most common as well as one of the earliest of the units of the symptom-complex that warrants the diagnosis of a fecundated ovum in the uterine cavity. Every woman does not conform to the same menstrual standard, although her menstrual function may be normal so far as she is concerned; but every woman does have her menstrual habit, a deviation from which should lead us to look carefully for a cause. In doing this we must remember that the causes of menstrual disturbance are many and varied. In ectopic gestation I have observed a large variety of deviations, the most common being the skipping of a period completely, either for a few days, a week or perhaps a month, and then its occurrence as a rule with profuse bleeding and irregularity.

I had one case of a woman who on the day of her normal menstruation, had a much slighter discharge irregularly and this spotting continued for a month when she consulted me. Her symptoms presented not alone the anomalous menstruation just mentioned, but she had pain over the lower abdomen to the right and was very tender, she had nausea, a loathing for food and an irritable bladder. By physical examination of the pelvis I was able to make out only an enlarged uterus. A few days' rest in bed so relieved the abdominal tenderness that I was enabled to make out a resistance and vaguely a tumor to the right of the womb. This woman was 38 years of age and had not been pregnant for 12 years. She gave a history of previous pelvic trouble, in fact had had an operation 7 years before for perineal and cervical laceration with no apparent benefit. Within the last year she had been so conscious of pelvic difficulty, that she had been several times on the verge of seeing a physician. So confusing were the history, symptoms and physical findings that I recommended the administration of an anesthetic, curettage and a thorough physical examination of the pelvis, because so many pathologic possibilities presented themselves that I was at a loss for a plan of treatment. Although no decidua had been passed previously, about a tablespoonful of shreds, which proved to be decidua, was removed. The mass I had felt on the right of the uterus was now well defined, presumably in the ampulla of the Fallopian tube. It was about the size of an orange, was separated from the uterus, and fairly movable. I allowed the patient to come out of the anesthetic, told her and the husband of my suspicions of an extra-uterine pregnancy, advised her removal to the hospital and an operation through the abdomen. This was consented to, and at St. Mary's hospital I opened the abdomen and found considerable blood in the peritoneal cavity. The tumor mass was, as stated, in the right tube and presented all the characteristics of a pregnant tube. It was situated in the ampulla and had a minute rupture on its posterior peritoneal surface. It was easily removed together with an adherent appendix. Old adhesions were found around the tube removed, as well as around the left one, amply sufficient to interfere with the mechanism of the tube.

As Webster says: "The fertilized ovum coming in contact with any portion of the Mullerian tract, is capable of establishing with it that relationship that is necessary to its growth" and the rest of the tract shares in the changes, and either establishes sympathetic relations with near and remote organs or affects them by toxic influence depending upon our individual view point. The pregnant tube will then be expected to give rise to enlargement of the uterus, although perhaps not to the same degree as in uterine gestation, to purplish discoloration of the vaginal mucosa, to softening of the cervix. In the early weeks, when the gestation sac is in front of the womb, it may give rise to irritable bladder, or the same symptoms may be produced when it falls behind the uterus, pushing it forward. When retro-

uterine, it may interfere with the functions of the rectum. Although the fecundated ovum is not in the uterus, that organ proceeds to prepare for its reception and growth. As Bandl points out, the enlargement is greater the nearer the implantation is to the uterus.

Nausea and vomiting usually appear early and are very pronounced. Nervous phenomena are fully as well marked as in uterine pregnancy. The changes in the mammary glands occur later and are not as noticeable as in normal pregnancy.

Periodic colicky pains usually referred to are due to peritonitic irritation, and generally begin at the end of the first month. They are usually of a sharp, lancinating character, emanate from the lower abdomen, and radiate to the loins; as a rule, the abdomen is very sensitive during these attacks, more so in fact than when the condition is inflammatory, and the muscular rigidity is just as pronounced. These pains seem to have a tendency to recur in the normal period and are often described as labor-like. It seems to me necessary to caution observers against placing too much confidence in this symptom. The pain may be due to conditions preexisting and is often noticed in uterine gestation.

It is to physical signs, however, that we must turn to establish the strongest presumptive evidence of tubal pregnancy. These signs, as well as some of the foregoing, will depend very largely upon the location of the gestation sac. The primary lodgment of the fecundated ovum in ectopic gestation is in the tube as it passes through the uterine wall, tubo-uterine or interstitial pregnancy representing about 20 per cent. of the cases in the tube proper, 50 per cent. ampullar, or in the fimbriæ-infundibulum, about 25 per cent. Cornual pregnancy occurring in a bi-lobed uterus, and a possible few cases of ovarian pregnancy, make up the other 5 per cent. From these primary points of attachment, if the ovum continues to grow, there are five directions by which it may escape; by tubal abortion (which Boldt records as most frequently the case), or by rupture of the outer third of the tube, it may pass into the pelvis; by rupture of the main portion of the tube it may pass into the pelvis or abdomen; by the giving way of the lower margin of the tube it escapes into the folds of the broad ligament, or it may possibly escape through the uterine ostium and be cast off or form a uterine implantation.

Given a case of suspected tubal gestation, besides an enlarged uterus, we will find upon bimanual examination tumor formations that are reasonably characteristic, and will in many instances enable us to make a diagnosis before rupture. At one side of, or behind the uterus, will be found an elastic, sensitive and often pulsating tumor,

usually rather fixed. Further investigation generally distinguishes the ovary external to, but not a part of the tumor, and the finger can usually be inserted in an angle between the uterus and tumor. This latter condition may not prevail if the implantation is cornual or in the isthmus. Fortunately from a diagnostic standpoint, the fecundated ovum is arrested in the tube proper, ampulla or at the infundibulum tubæ uterinæ. Unless hemorrhage has taken place within the fetal membranes, in which case the ovum will die, the entire tumor consists of the enlarged tube, produced by the fetus and such placental tissue as can be developed from tubal mucosa. It is clear that many other conditions may closely resemble an unruptured pregnant tube, so that it will be necessary to associate closely a well taken history of the case. The conditions that come for differentiation most frequently are ovarian cysts, salpingitis, and fibromyoma of the uterus. An ovarian tumor complicating uterine pregnancy may be very confusing. An ovarian cyst gives a sensation of tense elasticity, is usually more movable and is not so tender. The fact that a pregnant tube is often as tender as an inflamed tube should not be lost sight of. Ovarian tumors are usually not sensitive or painful unless infected or if the pedicle becomes twisted.

A case occurred in my own practice of a woman, married ten years, pregnant once 7 years ago but miscarried at 3 months. She came to me about a year ago, complaining of an irritable bladder, irregular menses and a sense of weight in the lower abdomen. Physical examination revealed a slightly enlarged uterus and a tumor about the size of a hen's egg at the right horn. It seemed to be connected with the uterus, but not firmly, and was rather hard. The ovary could be felt external to the tumor. This case caused me not a little anxiety lest it should be a tubal pregnancy. I watched her sharply for a short time, noticing carefully the progress and behavior of all symptoms. The tumor and the uterus continued to grow, but no nausea, vomiting or breast symptoms developed. The more I studied the case the less was I inclined to regard it as a case of fetation. However, I recommended that the abdomen be opened and the condition dealt with. Under anesthesia the growth was clearly a pedunculated fibroid. Right here I wish to impress the importance of a physical examination under ether in doubtful pelvic tumors, as a means of gathering almost conclusive evidence as to their exact nature. On opening the abdomen the uterus was found to be quite uniformly enlarged to twice its natural size by a myomatous condition, and the tumor previously felt was, as suspected, a pedunculated subperitoneal fibroid. The physical findings, irregular uterine bleeding coming on

abruptly with pain, and irritable bladder presented a picture that made waiting a very anxious process, and so closely resembled a pregnant tube that I felt justified in referring to it here.

We are all well aware of the clinical picture produced by a profuse hemorrhage into the abdominal cavity as the result of a ruptured pregnant tube or a tubal abortion. This accident as a rule takes place at the 7th to the 12th week. It may be delayed much longer, and has been known to occur as early as the 2nd week. It is at this stage that we usually see these cases. The patient is generally perfectly conscious. The pallor of her face, gums and conjunctiva are extreme; the ears and cheeks have lost their blush, the nails are white and present no color when pressed and released, and the hands are cold and clammy. An examination of the pulse shows the tension to be low, the artery expanding with a little quick jump and as quickly subsiding, rapidly becoming smaller, then running in character before it finally ceases to be felt at the wrist. Counting the pulse every 10 minutes and observing whether it becomes weaker and more rapid, will enable us to judge the progress of the hemorrhage. It is surprising what an amount of internal bleeding these cases will stand. A good reason for this is probably the rapid absorption of the serum by the comparatively empty vessels of the peritoneum. The history that this condition of collapse is preceded by sharp abdominal pain can generally be elicited. Extreme degrees of intra-abdominal hemorrhage cannot readily be confounded with any other condition, but lesser degrees might readily be mistaken for a number of other lesions, provided the history is not clear and the observations inaccurately made. For instance, perforating gastric and duodenal ulcer with hemorrhage could be readily mistaken for a ruptured tube, intestinal strangulation, tumors with twisted pedicles and appendicitis. Twice within a year I have been called upon to make such distinction. In one case I was successful, in the other not.

Briefly the circumstances were as follows: Woman, age 34, mother of three children, and the subject of several miscarriages, had missed a period, and then flowed irregularly for a month. A sudden attack of pain in the abdomen on the right side induced her to call a physician. He found her very tender, with pulse 100. The next day she had more pain, increase in rapidity of the pulse and some fever. She continued for a week with two or three degrees of fever, rapid pulse, and abdominal pain. At this stage I was asked to see her by her physician, who gave me her history. I found her with a pulse of 120, temperature 101 degrees, great tenderness and muscular rigidity over the lower right quadrant of the abdomen. The patient was pale and very anemic, a condition that had come on rapidly with

her illness. The uterus was enlarged and she was flowing freely, passing shreds, the cervix soft and patulous, no distinct tumor about the uterus, but to the right was a soft, bulging swelling, tender and not boggy. The breasts contained colostrum. A diagnosis of probable ruptured tubal pregnancy was suggested and the patient sent to the hospital. She was at once prepared for abdominal section. Under ether anesthesia a marked tumor the size of a man's fist was found in the right iliac region, slightly below the usual location of the appendix. Celiotomy was performed and a large quantity of liquid blood with some blood clots were removed from the abdominal cavity. A tumor composed of organized blood clots and decidual tissue, containing a fetus about two inches long in its membranes, was found adherent to a loop of small intestine and omentum. The cord passed down to a rupture in the right Fallopian tube to which it was still attached.

Another case was that of a woman, age 28, mother of two children, youngest 3 years; no miscarriages. This woman came into my office one day complaining of pain and tenderness in her right side. After examining her I made up my mind that she had an attack of appendicitis, a condition for which I had seen her once or twice before. I recommended her to go to the hospital and have the appendix removed. As I was going to be out of the city for two or three days I advised her to go to bed and keep quiet until my return, when I would operate. The next day she was suddenly taken with an aggravation of the symptoms, which kept her in bed with her knees drawn up, and a hot water bottle on her abdomen. I found her on my return with slight fever, moderately accelerated pulse and a very tender, rigid right abdomen. No other thought was had but appendicitis, as the greatest tenderness was over that region and no other symptoms were complained of. I opened the abdomen, and to my surprise a considerable quantity of blood gushed out. I, of course, at once recognized the condition as being one of ruptured tubal gestation, and passing my hand down to the brim of the pelvis I found a ruptured tube with a fetus of only a few weeks, to which mass the appendix was adherent. As this woman's husband had been away for more than a year and interrogation as to possible pregnancy was avoided by the patient, no physical examination was insisted upon.

An advanced tubal pregnancy of three months, rupturing into the abdominal cavity, gives rise to the most pronounced symptoms of collapse, and these are the most desperate cases. Tubal abortions result in marked hemorrhage, but not as great as in the former class. Slow rupture of the tube, or rupture into the folds of the broad ligament, is the most favorable for the mother and allows better opportunity for treatment.

Discussion.

Dr. Edward Evans, of La Crosse—After an experience of about forty cases of extra-uterine pregnancy, I am still convinced that the previous history helps little or none. I have seen these cases in primiparæ and multiparæ, in those who have had a long period of sterility and those who have born children a short time before; so it seems to me that the previous history helps very little; but the history of the present illness is of great importance in diagnosis and we cannot go too carefully into every symptom and complaint of the patient if we wish to make an accurate diagnosis. Of course, the fortunate thing is that we need only to make a surgical diagnosis; but a careful history of the illness will generally help us before rupture occurs.

This occurred in a case I saw during the present year, where the diagnosis was easily made on the history without physical examination—physical examination probably would not have helped much, did not in fact, I think, because it was one of those very rare cases where the tumor was movable; it was a genuine ovarian pregnancy.

You may have seen the case recently reported by Dr. Clarence Webster. In that case the tube was perfectly normal, there being no adhesions except a few to the posterior pelvic wall, and the tumor was fairly movable on bimanual examination.

Another case seen a little while later, was also operated on before rupture had taken place. This was a primipara with no previous history of any infection either specific or otherwise; the other tube and ovary were normal.

On the other hand a case I operated upon two or three weeks ago and found to be a case of gonorrheal infection instead of extra-uterine pregnancy, shows that the history is not always reliable. This woman has a baby two years old, menstruated last on the 27th of March, was taken in the middle of April with excruciating pain, compelling the doctor to stay with her for five hours; on the 15th of May she was again taken with these same pains and began to flow, and continued to do so for a week. Then she got well and was able to do her work until the 18th of May, when she was again taken with very severe pains. After finding a tumor on one side, a diagnosis of ruptured extra-uterine pregnancy was made; but as I say, the case was one of gonorrheal salpingitis. I think that too often we do not make diagnosis early enough. Do not wait for the pallid countenance, the fast pulse and appearance of extreme hemorrhage. If you do, you let the safest time for the patient and the best for yourself go by.

Dr. C. M. Beebe, of Sparta—I recall a case in which recently my associates and I made a mistaken diagnosis of ectopic pregnancy with rupture. I will not go into the details of the case, but will say that the symptoms were such that we were positive of our diagnosis, but a laparotomy showed a small strangulated cyst which was hemorrhagic. The pain and shock from the strangulation of the twisted pedicle were similar to a rupture, and the bleeding into the cyst and pedicle accounted in a measure for the symptoms of internal hemorrhage. The following day the woman completed a very early miscarriage. The combination of conditions was very deceptive.

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EDITORIAL COMMENT.

FOR BETTER ORGANIZATION.

We desire to call the attention of the members of the State Society to the letter of its secretary ("The County Societies") on another page of this issue. While it may seem to some that our county organization is now so complete as to make unnecessary the visit of Dr. McCormack, the National Organizer, Dr. Sheldon is undoubtedly correct in his statement that continued agitation will make our society better and stronger. Added to this, Dr. McCormack—than whom no member of

the profession is better qualified to give many hints and much useful information for the improvement of our organization—is ready to devote as much time to Wisconsin as the Councilor Districts may demand of him. Dr. McCormack has already attended and addressed many county societies and, as he says, "By making it in a sense a practical school of instruction, or conference, as to the methods of making local societies successful and beneficial, much good has apparently been accomplished. This is the real problem now before the profession, and councilors know better than any body else can that there is danger of retrogression in many counties unless some special effort is made to put and keep life in their societies."

The State Society must not rest satisfied with its present success, but must continue to use every effort to increase its membership still more and enlarge its scope of usefulness. The plan suggested ought to be of much assistance to this end, and we hope the plea of the secretary will be heeded by the councilors.

TREATMENT AGAINST THE PATIENT'S WILL.

The relation of a physician to a sufferer who objects to receiving medical aid presents a puzzling situation. On the one hand the physician feels a moral obligation to apply his skill in case of disease or injury according to the approved scientific practice; on the other hand, it is the legal right of every man to be free from physical interference from any one else—be it physician or layman. We must except, of course, official interference under the police power for the general good, but this exception applies only to such acts which are for the public good, as the maintenance of a quarantine, and not to such acts as are justified only by the benefit the physician hopes for the particular individual. Carried to its logical conclusion, this right to immunity from bodily restraint, would imply that the surgeon must immediately desist from a painful treatment on the patient's cry of "Stop." The surgeon's legal justification then must be that the patient desires to be cured and does not intend his cries to be regarded. However, such reasoning cannot be applied in a case of attempted suicide where the patient deliberately resists all treatment. A case of this kind was recently presented to the Court of Appeals of New York under peculiar circumstances (Meyer v. Supreme Lodge K. of H., 64 L. R. A. 839). The facts were that a guest at a hotel swallowed a quantity of "Rough on Rats". A bell boy summoned a physician;

but on his arrival the sufferer insisted he wished to die, ordered the physician to leave and resisted medical treatment. The physician administered remedies by force. The man died, and in a suit to cover his life insurance, the insuring association sought to establish death by suicide and called the physician as a witness. The court decided that he could not testify on the ground that the information was acquired while acting in his professional relation and that therefore the communication was privileged. A minority of the Court, including Chief Justice Parker, dissented, taking the position that the suicide's statements were made to avoid medical attendance and not in any sense for the purpose of enabling the physician to prescribe. The decision of the majority, however, shows the present strong tendency of courts to afford the widest protection to the confidences of patient to physician.

In the opinion the Court touches on the question of treatment against the patient's will, and states that in this case it could not be considered an assault. As suicide is a crime, it was the physician's legal duty to prevent it. Application of the same doctrine of justifying treatment against the patient's will to any other case may well be doubted.

REGULATION OF THE SALE OF CARBOLIC ACID.

At a recent meeting of the New York Board of Health the following amendment was made to the Sanitary Code: "No phenol, commonly known as carbolic acid, shall be sold at retail by any person in the City of New York, except on a prescription of physician, when in a stronger solution than 5 per cent."

We have on a previous occasion called attention to the laxity of our own laws with respect to the sale of carbolic acid. The ease with which this drug is obtained by anyone upon application is responsible for the vast number of deaths by suicide as chronicled in our current newspapers. The action of the New York Board of Health must be heartily commended and we trust that the precedent hereby established may find favor in the eyes of other health boards. As carbolic acid heads the list of poisons in the frequency with which it is used for purposes of suicide, not only will such a provision reduce the number of deaths by this poison, but the total number of suicides by whatever cause will be materially lessened.

THE STATE BOARD ACTIVE.

We are glad to note to the credit of the State Board of Medical Examiners another conviction for the illegal practice of medicine in this state. A man styling himself "Doctor Mak" was found guilty at Ashland, but—according to newspaper reports—was given time to leave the county under suspension of sentence.

"Doctor Mak" has the amusing effrontery of most itinerant frauds. His learning and ability are assured us by the fact that he is sponsor for books such as these: "Brainology," "Mental Dynamite," "Echoes from the Heart" (poems), "The Fool Killer," "Moneyology," "Heaven on Earth," "Mak's Grammar."

He speaks of himself in this modest vein: "Doctor Mak, himself, is the finest specimen of health in all the world, and it does sick people good just to look at him."

Inasmuch as this gentleman may be pursuing his methods in other counties in this state, it would be well for physicians to be on guard. We trust that, should another conviction follow, he may be put out of harm's way for a sufficiently long period, to test the healing powers of his "good looks" upon companions in crime.

RECENT ADVANCES IN THE STUDY OF SYPHILIS.

Many attempts have been made in recent years to inoculate animals, especially apes, with syphilis, but all were unsuccessful. The experiments showed that monkeys in general are naturally immune to syphilis, but that, nevertheless, in several species, contain syphilitic manifestations developed, which resembled those observed in man.

Metschnikoff and Roux, of Paris (*Annales de l'Institut Pasteur,* Dec., 1903, and *La Syphilis,* March, 1904) persisted in their attempts at inoculation, and finally, with the chimpanzee as the subject, were successful.

A two-year-old, female chimpanzee was inoculated on the clitoris and right eyebrow with secretion obtained from a chancre in man; five days later, a second similar inoculation was made, again on the clitoris. Twenty-six days later, at the site of the first inoculation, a typical hard chancre had developed; the inguinal glands were enlarged and hard. At a session of the Academy held at that time all the members diagnosed the presence of syphilis in the chimpanzee. Four weeks later a typical papular exanthem appeared, and mucous

patches were present in the mouth, with general adenopathy. At the end of three months the animal died of a pneumococcic sepsis.

A second chimpanzee was successfully inoculated with syphilitic products obtained from the first animal: but inoculation of a different species failed.

Lassar's inoculation experiments were equally successful; he also produced syphilis in a second chimpanzee with virus obtained from the first (*Berliner Klin. Wochenschr.*, No. 52, 1903, No. 30, 1904, and *Dermatolog. Zeitschr.*, Jan. and Aug., 1904). Nicolle demonstrated that inoculation of macacus sinicus resulted only in the appearance of primary syphilis, and that secondary symptoms of consequence did not appear; a similar condition obtains in macacus cynomolgus. Inoculation of a chimpanzee from the latter animal resulted in the appearance of only a few, mild symptoms of syphilis—chancre and glandular enlargement.

These experiments demonstrate, therefore, that the chimpanzee is an animal susceptible to syphilis—identical with that observed in man; that the virus is inoculable only into the same species of animal; that rapid immunization against infection occurs, for a second inoculation was unsuccessful, although done within five days after the first inoculation; and that attenuation in viruleney is obtainable by the inoculation of macacus, thus making it possible to produce an artificial immunity by means of the attenuated virus.

Neisser, in an address before the V. International Dermatological Congress, held in Berlin, Sept. 12, 1904, reports successful inoculations, and in addition showed that the introduction of even large amounts of serum obtained from persons with recent syphilis, is not injurious to the chimpanzee, and does not result in manifestations of syphilis, thus confirming the results of similar experiments made by him on human beings (*Archiv f. Dermatolog. u. Syphilis*, Vol. 44). The chimpanzee thus treated with "syphilis serum" over a long period of time, nevertheless developed syphilis when inoculated with particles of tissue scraped from a tonsillar mucous patch, even though the inoculation followed immediately upon the last injection of "syphilis serum." The serum does not produce immunity—even passive immunity of short duration—but probably, in spite of this, contains antibodies, though too small in amount or too weak to prevent the disease.

The first direct step, and perhaps the most difficult, toward the possible production of a "preventive serum" has thus been taken, and after this promising beginning it appears to be but a matter of time when "preventive" serum or even "curative" serum will be a reality.

NEWS ITEMS.

Medical Colleges Open.—The Wisconsin College of Physicians and Surgeons held its opening exercises at the College building, Sept. 20. Dr. Arthur J. Patek, adjunct Professor of Medicine, delivered the opening address.

The Milwaukee Medical College began its eleventh annual session Sept. 20, with an address of welcome by Dr. W. H. Earles, and a formal address to the students by Dr. W. G. Doern, the newly elected Professor of Anatomy.

Archives of the Roentgen Ray (Formerly Archives of Skiagraphy.) (Rebman Co., New York.)—We are pleased with the excellent appearance of this Journal. This periodical has now become an international Journal, with Prof. H. G. Piffard, of New York, as its American editor. The skiagraphs in the September issue are of unusual merit and show very clearly the good effects of the Roentgen-Ray in certain skin lesions.

New State Society Journals.—Several new State Society journals have been added recently to those already existing. The states now publishing their transactions in journal form are: Arkansas, California, Colorado, Iowa, Illinois, Kansas, Kentucky, Michigan, Mississippi, Missouri, New Jersey, New York, Pennsylvania, Wisconsin and Nebraska.

Delegates to Pan-American Congress.—Dr. Edward Evans, of La Crosse, and Dr. William Neilson, of Milwaukee, have been appointed delegates, representing the State Medical Society of Wisconsin, to the Pan-American Medical Congress, which will be held in Panama, from the 4th to the 7th of January, 1905.

The New York Skin and Cancer Hospital announces that Dr. L. Duncan Bulkley will give a series of Clinical Lectures on Diseases of the Skin, in the Out-Patient Hall of the hospital, on Wednesday afternoons, commencing November 2d, 1904, at 4:15 o'clock. The course will be free to the medical profession.

"The Twentieth Century Physio-Medical College," doing business at Guthrie, Oklahoma, whose graduates "can practice anywhere in the United States," is in trouble. A petition has been filed for a revocation of its charter on the ground that it is a fraudulent institution.

Journal Consolidation.—Two medical journals, Southern Medicine and Gaillard's Medical Journal, both of which have enjoyed a wide patronage in the South, have amalgamated and will henceforth be published under the editorship of Dr. William E. Fitch, of Savannah, Ga.

An Epidemic of Typhoid rages at Port Washington, Wis. Over 70 cases have been reported to date and the usual number of deaths are recorded. The supposition is that the infection may be traced to milk. The State Board of Health is conducting an investigation.

Dr. U. O. B. Wingate, for many years located in Milwaukee, has been appointed physician-in-chief to the Resthaven Sanatorium at Waukesha. This institution will be opened to the public in May of next year.

Dr. Hugo Philler of Waukesha has won his suit against the county for post-mortem fees in a case in which the County Board members took it upon themselves to arbitrarily reduce the amount of his bill.

Dr. Solon Marks, the Nestor of the medical profession of Milwaukee, recently had the misfortune to fall and sustain a fracture of the femur. Hopes are entertained for his speedy recovery.

Dr. Wm. Thorndike of Milwaukee has been appointed by the Governor a delegate to the International Congress of Military Surgeons which meets shortly at St. Louis.

George J. Hirth, M. D., University of Michigan, 1890, who had practiced in Milwaukee for the past eleven years, died at the Milwaukee Sanitarium, Sept. 15.

Carl F. Kordenant, M. D., College of Physicians and Surgeons, Chicago, 1887, died at his residence in Reedsburg on Sept. 19, 1904, after a long illness.

Dr. J. W. Frew has been appointed Assistant Surgeon in the Wisconsin National Guard, as the successor of the late Dr. Ralph Chandler.

Professor Niels Finsen, the great authority on light therapy, died Sept. 24, at Copenhagen.

CORRESPONDENCE.

NOTES FROM VIENNA.

EDITOR WISCONSIN MEDICAL JOURNAL:

You doubtless remember what an interesting panoramic view of Vienna and its surroundings one obtains from Kahlenberg on a bright Sunday morning. In the valley below, three miles distant, lies the old city with its 1½ million people. To your left is the blue Danube, and a little farther on across the river may be seen the battle fields of Aspern and Wagram, where Napoleon contended with the Austrians in 1809. Beyond the city and to your right is seen the immense Wiener Wald, a veritable fairy land for the tourist and the lover of nature. With your field glass you can see the beautiful gardens and the charming summer palace of Schönbrunn, and in the distance are Schneeberg and the Austrian Alps, near Semmering—2½ hours by rail from Vienna. No great city is, so far as I know, blessed with such charming natural scenery.

The artist and musician find in Vienna a profitable place for study.

The collection of paintings in the Imperial Gallery, the Liechtenstein, the Harrack, and the Czernin Galleries are very valuable and are specially rich in canvasses of the Rubens, Van Dyke, Rembrandt, Dürer and the Venetian School, and have large collections of "Little

Dutchmen" and a very good series of Velasquez. When we consider in this connection the collection of original drawings in the Albertina, numbering about 18,000, of which 50 are by Raphael, 150 by Dürer, 52 Rubens, 147 Rembrandt, in addition to 220,000 engravings, it must be admitted that Vienna is an art center of no mean import.

The opera and music are generally unsurpassed, and this is not surprising when we consider the fact that so many of the world's great composers, from Beethoven down, made this city their home, and this must have influenced the now very universally developed taste for the highest type of classic music.

As a people the Viennese are very interesting and offer a positive contrast to the people of Northern Europe. They are lively, witty, always enjoy a joke, and never fail to celebrate a holiday or to have a real good time whenever it is possible.

To the medical man the city is exceptionally interesting, and in internal medicine and general pathology it has a wealth of material and a force of clinical and scientific teachers that are certainly not surpassed in any other city in the world. One of the agreeable surprises to the general practitioner here is the fact that the Viennese teacher clings very persistently to the well established clinical methods and uses the laboratory only to reinforce his bedside findings, and never permits the laboratory diagnostician to supplant the clinician.

The teaching to the post-graduates is essentially personal, the class number being limited to from 4 to 10. It is obvious that this has very decided advantages over the amphitheatre method, which at best can only demonstrate the mere elementary and the most superficial signs and symptoms of medical and surgical diagnosis, and generally is but a mere grand stand spectacular display, having absolutely no value as instruction to the student. It is surprising, considering the fact that from 150 to 300 American physicians have been students in Vienna for a year or more during the past 50 years, that none of these have had sufficient influence to transplant the method to a single one of our 225 or more so-called medical colleges. The method takes more of the teacher's time, and what is perhaps of more consequence, requires infinitely more knowledge, as it puts the student upon a nearly equal footing with the professor in the matter of making a diagnosis or disputing with him the correctness of his findings. If this method could be successfully transplanted to America we should probably have fewer professors—no great loss—and a greater number of competent diagnosticians—a very agreeable gain.

But why should an American go to Vienna to study medicine? What advantages are there over those now offered in America? There

are certainly a great number of disadvantages, and chief among these is no doubt the language and the problem of orientation in a foreign country and amidst foreign population. None save eye and ear men, whose courses are mostly given in English, need come and expect to do satisfactory work without a fairly good knowledge of German. A speaking knowledge of the language is not especially necessary, but it is essential to have a vocabulary large enough to cover the words and idioms of every day speech, without which you are at sea without either compass or rudder.

The most popular courses here in internal medicine are those under Primarius F. Kovacs at the IV. Medical Clinic, and Professor N. Ortner at the Franz Joseph Hospital, on Saturdays only, and those given by Docents Türck, Schmidt and Stejskal at Professor E. Neusser's Clinic. Places are obtained by registration in a book which is in charge of some member of the class. As to Kovacs, you may be prepared to wait about 4 to 6 months before getting into his class, for there are usually from 30 to 40 on the waiting list.

In gynecology very good work is done in the Chrobak and Schauta clinic, the teachers most in demand being H. Peham, Joseph Halban and H. Keitler. The diagnostic courses are limited to eight persons and in the operative work to five, the charges being about 80c per hour per person. In the medical courses the charges are 40c per hour per person.

In gross pathology Professor Ghon gives a course that for variety and abundance of material and clearness of presentation is unexcelled. You have in addition the privilege of attending the post-mortems every morning, Sundays not excepted. Usually from 5 to 10 bodies are examined every morning. Professor H. Albrecht, at the Poliklinic, gives a very excellent course in pathology, and offers the opportunity to prepare and follow the material from the subject until it is placed under the microscope for the final examination. Laboratory courses are also given by Ghon's assistants, Stoerk and Landsteiner, in pathology and bacteriology. The cost of laboratory courses ranges from 60 to 90 cents per hour for the instructor's time, usually one hour per day, and you have the use of the laboratory from 3 to 6 hours per day without additional charge.

In diseases of children Professors Escherich and Monti and Docent Knöpfelmacher give very good demonstration courses at the St. Anna, Poliklinik, and Karolinen Hospital respectively.

In venereal and skin diseases there is a superabundance of material that is well presented by such men as Professors Ernst Finger and S. Ehrmann, and Docents Zumbush, Oppenheim and others. Finger has just been promoted to the position of "Hofrat" and has

been given charge of the Neumann Klinic in the Allgemeine Krankenhaus.

In diseases of the nervous system the Wagner clinic offers a great variety and abundance of material, the ambulatory clinic under Docent Adolph Fuchs being especially popular among Americans. Opportunity for laboratory work on the anatomy, physiology and pathology of the nervous system is given in the Neurologic Institute under the famous neurologist, Professor H. Obersteiner. Here you will find students from all quarters of the civilized world doing work along all lines in this very interesting field.

In the special departments of the eye, ear, nose and throat the work is said to be excellent and offers an abundance of material under such men as Professors E. Fuchs, Adam Politzer and Ottocar Chiari. It is interesting to note how active, energetic and enthusiastic Adam Politzer still is, and that notwithstanding his age and great renown he continues to give courses to physicians.

With the surgical department I have had no experience, gynecology excepted. In a general way I think it admitted that this department is not specially strong in Vienna. Outside of surgical pathology and possibly surgical diagnosis, America it appears to me excels in pure surgery anything I have observed here.

Since writing the above Vienna has disappeared from sight and given place to beautiful visions along the blue Danube, which, by the way, is not blue but dirty gray like our own Missouri. The scenery from Krems to Mölk is, however, very beautiful. If you want to see the old historic city, Kahlenberg, Leopoldsberg and other points of interest disappear gradually and beautifully as in a dream, take the evening boat up the Danube to Mölk. It is a quiet and comfortable trip, and you will have an abundance of time in the early morning to see the interesting part of the Danube.

JULIUS NOER, Stoughton, Wis.

Yellow Fever—GUITERAS (*Jour. of Amer. Med. Assoc.*, July 9, 1904) in discussing the yellow fever epidemic at Laredo, Texas, arrives at the following conclusion: The mosquito (Stegomyia fasciata) is the only means of transmitting yellow fever. The reproduction of the mosquito can be prevented by oiling all stagnant pools of water. The absolute enforcement of sanitary measures is a necessity in controlling an epidemic of this disease; especially important is the early reporting of all cases of yellow fever, as the mosquito is only infected by biting a patient during the first three days of the disease. A mosquito-proof yellow fever hospital is a necessity, and the public should be educated in the manner of protecting themselves against infection, and be taught to acknowledge the existence of the disease in their midst. (L.F. Jermain.)

THE STATE MEDICAL SOCIETY OF WISCONSIN.

ORGANIZED 1841.

Officers for 1904-1905.

C. W. OVIATT, Oshkosh, President.

J. A. L. BRADFIELD, La Crosse, 1st Vice-President.

GILBERT E. SEAMAN, Milwaukee, 2nd Vice-President.

A. B. ROSENBERRY, Arbor Vitae, 3rd Vice-President.

CHAS. S. SHELDON, Madison, Secretary.

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FOR TWO YEARS.

3rd Dist., F. T. Nye, - - - Beloit
4th Dist., E. S. Hooper, - - Darlington

FOR THREE YEARS.

5th Dist., J. F. Pritchard, - - Manitowoc
6th Dist., J. S. Walbridge, - - Berlin

FOR FOUR YEARS.

7th Dist., W. T. Sarles, - - - Sparta
8th Dist., T. J. Redelings. - - Marinette

FOR FIVE YEARS.

9th Dist., D. L. Sauerhering, - Wausau
10th Dist., E. L. Boothby, - - Hammond

FOR SIX YEARS.

11th Dist., J. M. Dodd, - - Ashland
12th Dist., A. T. Holbrook, - - Milwaukee

Next Annual Session, La Crosse, June, 1905.

The Wisconsin Medical Journal, Official Organ.

SOCIETY PROCEEDINGS.

THE COUNTY SOCIETIES.

It was frequently remarked last year, while we were organizing our 62 County Societies, that the real test of the reorganization movement would come later. It was said that it might prove a more difficult task to keep these societies alive and growing than it was to start them. This is manifestly the most important problem before us this present year. In this matter it is yet too early to speak with authority. So far as heard from, the organizations are all intact and many counties are doing exceptionally good work—with enthusiastic meetings and a large attendance. The responsibility and burden of carrying on the good work rests mainly on the Councilors and officers of the various societies, especially the secretary. To insure success requires constant activity and unceasing vigilance. Not only must the old members be kept in line, but every good man not now in the organization should be induced to join before the next annual meeting of the State Society. The National Organization is willing and anxious to help us in all ways that it can. To this end the American Medical Association has, as one of its officers, a "National Organizer," in the person of Dr. J. N. McCormack, whose work is to go from state to state, in the various

Councilor Districts, to assist in perfecting and strengthening the organization of the county societies.

Upon the invitation of the Council, Dr. McCormack plans to come to Wisconsin the coming month, or so soon as suitable plans can be laid and the appointments made. He will propose to hold meetings or conferences at some central and accessible point in each of the twelve Councilor Districts, to which shall be invited the whole profession and especially the officers and members of the County Societies. His expenses are wholly paid by the National Society, while our duty is to secure for him an attendance worthy the occasion. Dr. McCormack is a member of the original committee on reorganization appointed by the American Medical Association, and has a larger experience and better understanding of the methods for the successful upbuilding and management of medical societies than any other man in the country. Only good can come of the proposed plan, and the profession of the state cannot afford to refuse this proffered assistance. Moreover, no time should be lost in acting upon the plan at once. The Councilors are especially requested to communicate immediately with the county secretaries and arrange for a series of meetings, as has been suggested. If thought desirable other features may be added which will advertise the meetings and make them more attractive. In addition to the address of Dr. McCormack, a paper by some well known member of the profession may be presented—the *social* features should be emphasized, and a banquet would be entirely in order. It is a capital idea for the profession in each Councilor District to meet occasionally for no other purpose than to become acquainted and to strengthen the professional spirit.

Therefore, let us go to work at once and get all the good out of this undertaking which is possible. The Councilors are requested to communicate at once with the Secretary, Dr. C. S. Sheldon, that the itinerary may be arranged as speedily as the circumstances will permit.

(C. S. S.)

BARRON-GATES-POLK COUNTY MEDICAL SOCIETY.

The regular quarterly meeting was held at the Courthouse, Ladysmith, Sept. 6. About fifteen members were present.

There was a very short but interesting program followed by a banquet. Drs. Carnahan, Stilson and Lundmark were admitted to membership.

At the next meeting which will be held at Cumberland December 6th, the Washburn-Sawyer-Burnett County Medical Society will be invited to be our guests.

It was decided at this meeting to appoint members to open the discussion of papers as is done at the meetings of the State Society.

I. G. Babcock, M. D., Secretary.

GRANT COUNTY MEDICAL SOCIETY.

The regular meeting of the Grant County Medical Society was held at Montfort, Sept. 8, 1904. Owing to the neighboring fairs and the lack of facilities for reaching the place of meeting only a small number of the members were present.

Papers were presented by Drs. M. B. Glasier, E. A. Ketterer, P. L. Scanlan and R. H. Jackson of Madison. The question box introduced a number of subjects on which there was free discussion.

Dr. Jackson showed a large number of gallstones taken from subjects on whom he had operated. Dr. Cunningham presented some pathological specimens taken from cases of appendicitis upon which he had operated.

It was decided to have the next meeting at Lancaster, at which time a banquet will be held.

Dr. Grimes of the Iowa County Medical Society, and Dr. Jackson of the Dane County Medical Society were guests at the meeting.

P. L. SCANLAN, M. D., Secretary.

LA CROSSE COUNTY MEDICAL SOCIETY.

At the regular monthly meeting of the La Crosse County Medical Society the acting president, Dr. Bradfield, appointed a committee composed of the following physicians, Drs. E. Evans, A. Gunderson, C. H. Marquardt, D. I. McArthur and L. J. Callahan, to attend to the arrangements necessary for the meeting of the State Medical Society to be held at La Crosse in 1905.

C. H. MARQUARDT, M. D., Secretary.

RICHLAND COUNTY MEDICAL SOCIETY.

The meeting of the Richland County Medical Society held at Riverview, Aug. 25, was a very interesting and profitable one. The following program was presented:

"The Principals and Practice of Medicine".....Dr. H. J. Wall.
Discussion opened by Dr. Pickering.

"My Favorite Remedies and Why".....Dr. J. C. Wright.
Discussion opened by Dr. Robt. Reagles.

"The Physician; His Social Side".....Dr. Geo. Jameison.
Discussion opened by Dr. DeLap.

"The Physician; Conduct and Duty in the Sick Room"..Dr. Grant Curless.
Discussion opened by Dr. Hodgson.

"Minor Surgery".....Dr. F. W. McKee.
Discussion opened by Dr. C. F. Bowen.

"My Ideal of a Physician's Office".....Dr. P. G. Lasche.
Discussion opened by Dr. Hoffman.

"Puerperal Eclampsia".....Dr. A. D. Campbell.
Discussion opened by Dr. Sara Elliott.

"How I Like the West".....Dr. Robt. Reagles.
Discussion opened by Dr. E. P. Kermott.

"Neurasthenia" .....Dr. Foster.
Discussion opened by Dr. E. P. Kermott.

"How I Like the New Constitution and By-Laws".....Dr. Will Burns.
Discussion opened by Dr. G. R. Mitchell.
"Obstetric Cases; When Abnormal".....Dr. M. W. Haskell.
Discussion opened by Dr. Garner.

Drs. Pickering and Henry of the Grant County Medical Society were present as guests and took an active part in the discussions.

A vote of thanks was tendered Dr. E. P. Kermott for the use of his summer cottage. The next meeting will be held at Lone Rock, Oct. 17.

R. H. De Lap, M. D., President.
M. W. Haskell, M. D., Secretary.

TREMPEALEAU COUNTY MEDICAL SOCIETY.

The regular quarterly meeting of the Trempealeau County Medical Society was held in Dr. McFarland's office, Trempealeau, Sept. 14th, President G. N. Hidershide in the chair.

A paper on "Diagnosis and Treatment of Diseases of the Stomach by means of the Stomach Tube," was read by Dr. Jos. Littenberger and discussed by the society.

Dr. McFarland then presented a case for diagnosis which proved very interesting. The society requested him to report on it at the next meeting, to be held at Arcadia some time in December.

H. A. Jegi, Secretary.

WASHINGTON COUNTY MEDICAL SOCIETY.

The last meeting of the Washington County Medical Society was held in Kewaskum, Sept. 28th. The attendance was small. Dr. Wehle read a paper on "Advantages of Water Works and a Sewer System for Smaller Towns." This was ordered printed in the county press. Dr. Heidner read a brief paper on "Abortion." The next meeting will be held in West Bend, on the last Wednesday in December.

G. A. Heidner, Secretary.

ELEVENTH DISTRICT MEDICAL SOCIETY.

The first semi-annual meeting of the Eleventh District Medical Society was held at Ashland, September 8-9, 1904. At the business meeting the organization was made permanent, and the following officers were elected: Dr. J. M. Dodd of Ashland, president, and Dr. D. H. Lando of Hurley, secretary and treasurer. A constitution containing the same requisites as to qualification of membership, as the constitution of the state society was adopted; giving the time of meeting as the second Tuesday and Wednesday of January and July. It was also decided to issue membership cards on the payment of the membership fee of $1.

A very good programme was offered consisting of five papers—all of which were well written and very interesting and instructive. An elaborate banquet at the Knight Hotel was given by the Ashland County Society, and this was followed by a dancing party.

On the second day (Sept. 9th) two clinics were held—one at Rinehart Hospital, conducted by Dr. Rinehart; the other at the newly erected St. Joseph's Hospital, conducted by Dr. Dodd. Dr. Rinehart presented cases of appendicitis, amputation below the knee, and obstruction of the common bile duct; and also showed a number of compound fractures which were very instructive as well as interesting.

Dr. Dodd presented several cases of appendicitis, showing the different stages, as well as a case of salpingitis; Dr. O'Brien presented a number of instructive medical cases.

The visiting ladies were given an automobile ride, also a luncheon at the Knight Hotel. A boat ride on the bay closed the programme. We wish to thank the Ashland County Medical Society, as well as the ladies, for their courtesy and interest in the meeting and elegant entertainment.

The attendance was very good, but we hope for a better attendance at our next meeting at Superior, January 10th and 11th, 1905.

All members wishing membership cards will please send the fee to the secretary.

D. H. Lando, M. D., Secretary,
Hurley, Wis.

CENTRAL WISCONSIN MEDICAL SOCIETY.

The annual meeting of the Central Wisconsin Medical Society and the semi-annual meeting of the Dane County Medical Society were held in conjunction on July 26, at Madison. Over 40 members were present and the meeting proved to be very interesting, all present deriving profit from the thorough discussions of the various subjects considered.

The following program was presented:

1. "The Importance of Adenoids and Enlarged Tonsils." Dr. A. F. Burdick, Beloit.

2. "Empyema." Dr. Arthur C. Helm, Beloit.

3. "Appendicitis—Diagnosis and Treatment." Dr. P. L. Markley, Rockford, Ill.

4. "Appendicitis—Diagnosis and Treatment." Dr. D. R. Connell, Beloit.

5. "Gallstones, with report of five cases." Dr. R. H. Jackson, Madison.

6. Paper. Dr. Ferd. Schmitter, Instructor in Anatomy, University of Wisconsin.

After a banquet at the Park Hotel, at which Dr. Edward Evans presided as toastmaster, the afternoon session opened with the election of officers. After this the following papers were presented:

7. "Report of Case of Sarcoma of Humerus, with Operation." Dr. L. H. Prince, Palmyra.

8. "Hematology as an Aid to Diagnosis." Dr. C. S. Winn, Rockford, Ill.

9. "Report of Case. Amputation of entire upper extremity for Sarcoma of shoulder joint." Dr. George Keenan, Madison.

10. "Action and Uses of Cycloplegics." Dr. S. R. Boyce, Madison.

BOOK REVIEWS.

The Student's Handbook of Surgical Operations.—By Sir Frederick Treves and Jonathan Hutchinson, Jnn. (W. T. Keener Co., Chicago.)

This little volume of 486 pages purports to be an abridgment of the author's large work of the same title, and "intended for the use of students who are preparing for the final examinations, or who need a handbook to assist them in carrying out operations upon the dead body." The small size of the volume, and binding in flexible covers, make it convenient for these purposes.

Although giving a detailed description of the technic of a large number of surgical procedures, according to the author's methods, and bearing the stamp of his high authority, this handbook cannot be said to be adapted to the needs of the American student. Procedures with which the latter is expected to be thoroughly familiar, *e. g.* the cautery operation for hemorrhoids, Wyeth's excellent device for controlling hemorrhage in amputations or exarticulations at the hip, and other valuable methods (regarded so in this country, at least), are entirely omitted. McBurney's muscle-splitting incision is dismissed as being "a clumsy method, rather cramped and suitable only for uncomplicated cases." Per contra, lumbar colotomy, an operation admittedly "almost obsolete," is given six pages of very minute description. The lists of instruments given as required for the different operations contain much unnecessary detail and abound in distinctions not familiar to the American student or surgeon. The operation of trephining, *e. g.* is said to require about twenty-one different kinds of instruments, including "a pair of Hey's saws." "Hopkin's or Hoffman's rongeur," etc., while neither the DeVilbiss instrument nor the Gigli saw are mentioned. Further detail is unnecessary. (H. R.)

A Text-Book on Diseases of the Eye, by Howard F. Hansell and Wm. M. Sweet, M. D. (P. Blakiston & Son, Philadelphia.)

The authors and publishers are to be congratulated upon the artistic appearance of this book and the excellent manner in which the subject matter is presented. The well known names of the writers is a sufficient guarantee that the book is an honest presentation of the essentials of ophthalmology and that it is up-to-date in every important particular. Leaving out comparatively unimportant details and speculative theories they have confined themselves to those matters which good judgment and large experience point out as necessary to a good working knowledge of ophthalmology. The book is clearly and concisely written and systematically arranged, and profusely illustrated, many of the illustrations being new and original, a large number beautifully colored. Altogether it must prove to be just the kind of a text-book for the student and general practitioner.

The chapters on "The Pupil in Health and Disease," by Wendel Reber, and "Ocular Symptoms in General Disease," by Casey Wood, should be of particular interest to every general practitioner, though the latter chapter in some respects is too brief. (G. E. S.)

The Commoner Diseases of the Eye.—For students of medicine. By Casey A. Wood and Thos. A. Woodruff, Chicago (G. P. Engelhard & Co.)

This work is an amplification of Wood's small manual on "Diagnosis and

Treatment of Eye Diseases," and is gotten up with special reference to the student and physician in general practice. It is written in plain, simple language, and for a book of such modest pretentions, is well illustrated.

The relationship of eye conditions to general diseases is thoroughly discussed in Chapters XV, XVI, XVII.

The book concludes with an excellently practical chapter on Ocular Therapeutics.—G. E. S.

CURRENT LITERATURE.

Treatment of Serous Effusions.—JAMES BARR (*Brit. Med. Jour*, March 19, 1904) reports his experience in the treatment of serous effusions by the injection of adrenalin chloride into the cavities after withdrawing the fluid.

The first case was one of pleural effusion due to cancerous involvement of the pleura; in this case the rapid reaccumulation of fluid, necessitating four tappings removing 250 ounces within two weeks, demanded some radical treatment, and as an experiment one dram of adrenalin chloride solution, 1/1000, was injected after the fluid had been withdrawn. There was no further secretion, so that tapping was not again required.

Following this experience, the treatment was applied to cases of ascites due to hepatic cirrhosis, but as the condition here is due to a mechanical obstruction the results were not pronounced, although the rapidity of accumulation was diminished. The quantity employed was 2 or 3 drams and no ill effects were observed.

In the case of a 9-year-old child with pericardial effusion and rapid reaccumulation of fluid, 40 minims of the solution were injected after the second tapping; this was immediately followed by alarming symptoms, indicating too great contraction of the coronary arteries. These symptoms passed off quickly and there was no further accumulation of fluid. In this case the author thinks the dose administered was too large.

In a case of tuberculous peritonitis with ascites, three tappings, each followed by the injection of 2 drams of adrenalin chloride solution and four pints of sterile air, were required before reaccumulation ceased.

Barr has devised a special apparatus for simplifying the technic. The author thinks the method one of distinct usefulness in properly selected cases. (A. W. M.)

Treatment of Enteric Fever.—SIR J. W. MOORE (*Practitioner*, January, 1904) calls attention to the necessity for sanitary housing of the patient, and attributes a part of the success of hospital treatment to the benefit resulting from the change to the clean and well ventilated wards.

He believes that in many instances troublesome diarrhea is started by routine purgation at the beginning of the attack. It is desirable that the intestinal canal should be cleansed at the outset, but the process must be carried on with extreme caution and all strong purgation avoided.

Pyrexia should be looked upon as a general or essential, and—within definite limits—a beneficial reaction of the organism to the changes due to the causative agent of the disease. This reaction is necessary and useful so long as tissue-consumption does not rise to exhaustion, and the heart-muscle

or the nervous system does not suffer from hyperpyrexia. The internal antipyretics are useful only for relieving the pains, allaying cerebral excitement, or inviting sleep, and should be used only in small or moderate doses. The only safe way of reducing the temperature is the use of some form of hydrotherapy; sponging, the wet pack, cold baths, rectal injections of cold water all have their uses and small quantities of cold water sipped frequently often allays delirium and induces sleep. In exceptional cases quinine in full doses, 5 or 10 grains frequently repeated until from 20 to 40 grains have been given, may be used with advantage in the later stages of the fever when it assumes a remittent type.

Constipation at the beginning of the attack is best treated by calomel in moderate doses, but after the eighth day castor oil is the safest aperient.

When diarrhea is present beef tea or mutton broth should be stopped, milk should be boiled, and when cold given with a quarter or half its bulk of lime water, peptonized milk or wine-whey with egg water may be used. Salicylate of bismuth is an excellent remedy in the septic diarrhea of the sloughing stage, and at any period in the fever 10 minim doses of turpentine given systematically every few hours control diarrhea and tympanites in a satisfactory fashion. Caution is necessary in the exhibition of turpentine in the presence of albuminuria, or when there is disease of the kidneys and bladder.

Salicylate of quinine in 3 or 5 grain doses is recommended as an excellent intestinal disinfectant.

Intestinal hemorrhage calls for absolute rest, withholding of food, hypodermic use of morphine, and ice applications to the abdomen. When the hemorrhage is profuse or continuous, ice water enemata or rectal injections of saline solution may be used. Chloride of calcium in 20 grain doses every few hours or adrenalin may help to control the bleeding.

Perforation calls for immediate operation.

The management of the diet during the period of early convalescence presents one of the most difficult problems in the whole range of practice. Conservatism is urged, and the restriction of the diet to milk, milk toast, custards, light puddings, broths, and jellies for ten days after the temperature becomes normal and the bowel symptoms disappear, is advocated. (A. W. M.)

General Management and Therapeutics of Nephritis is reviewed by BEVERLEY ROBINSON (*Am. Jour. Med. Sc.*, July, 1904). The article is taken up mainly with the treatment of cases of Acute Nephritis and of cases of Chronic Diffuse Nephritis in which more or less acute symptoms, such as uremic manifestations and edema, have developed. He bases his treatment on two cardinal principles: (1) Physiological rest of the diseased organ; (2) Relief of function especially through the supplementary action of skin and bowels. The first of these he meets by rest in bed and a milk diet, supplemented by gruels, broths, koumyss, matzoon, peptonized or fermented milk and after a few days by arrowroot, rice or other light amylaceous food. Plenty of water must be taken. The second principle he meets by free movement of the bowels, hot wet packs, high rectal irrigations and saline diuretics. In marked edema incision and drainage under strict aseptic precaution may be necessary. The saline diuretics in these marked edematous conditions are highly recommended. In uremia he strongly advises venesection, followed

by intravenous saline infusion and oxygen inhalations. In less urgent cases he prefers the high rectal enema of normal salt to intravenous or subcutaneous infusions. Purgations and the hot pack are also of much value. In uremic convulsions, when the pupils are dilated or normal, he considers morphine in small or moderate doses of great benefit. In cases with contracted pupils it is contraindicated. (W. H. Washburn.)

On the Refraction of the Newborn—Prof. Elschnig, Wien (*Zeitschr. f. Augenheilkunde*, XI, p. 10) frequently found (by sciascopy and with the ophthalmoscope) in the newborn, from 2 hours to 2 days after birth, myopic refraction between 4 and 7 D. After instillation of atropine the accommodative myopia disappeared, and hypermetropia was ascertained. E. attributes the accommodation to inappropriate involuntary innervations at the first visual attempts. (C. Zimmermann.)

Is Corneal Astigmatism Hereditary? — E. Spengler, Hildesheim (*Klin. Mon. f. Aug.*, 1904, p. 164). S.'s table of the curvatures of the corneæ of five succeeding generations was commenced by de Wecker and continued by S. in the laboratory of Dr. Javal, Paris. It shows that not only astigmatism itself, but also its kind, position of axis, and degree, may be inherited. (C. Zimmermann.)

Insanitary Streets—*The Sanitary Record*, London, Vol. xxxiii.: Dr. Louis Parkes, in an address at a meeting of the Sanitary Institute, took occasion to call attention to the insanitary condition of streets in large towns and cities; "the two things which may be said to influence adversely the public health are dust and mud; of the two, undoubtedly, the more dangerous is dust." He suggested that some disinfectant solution should be mixed with the water in the watering carts, not necessarily to disinfect, but to deodorize the dirty wood road-ways. He is of opinion that if motor traffic could be made to supersede horse traction in London it is possible that the cost of scavenging, cleansing and watering could be reduced by half, and the cost of maintenance and repairs by a similar amount. "It is the horse that produces the dust, dirt and mud, and it is the horse's iron-shod feet that tear up the roadways, entailing such an enormous annual expenditure in repairs." In short, he believes that the encouragement of motor traffic is the only real and lasting solution of the "insanitary street problem." "The horse, however, is not the only sinner against road sanitation"—in his opinion "dogs in London are an unmitigated nuisance, they are certainly a common contributory cause to an unclean street." As a means of keeping the nuisance within bounds, a municipal tax is suggested. He sums up his argument as follows: "All animals in big towns, except, of course, man himself, are a nuisance." The editor, very wisely, we think, adds, "there are certain types of men who are a little lower even than the horse and the dog, and whose verminous condition makes our streets quite as inimical to a perfect sanitary state as these much-maligned four-footed creatures." (U. O. B. Wingate.)

Choked Disc After Contusion of the Head—J. Bachauer, Augsburg (*Deutsche Med. Wochenschrift*, 1904, p. 306) observed two cases of this affection, rather rare after contusion of the head, which apparently were due to an intracranial hemorrhage. In the first case, a fissure of the base was very probable, since the left abducens was paralyzed. B. emphasized the impor-

tance of the ophthalmoscopic examination in such cases from a medico-legal standpoint, since changes of the disc, headache and vertigo may persist for a long time after the accident, while the patient may otherwise appear healthy and may have normal vision. (C. Zimmermann.)

Human and Animal Tuberculosis—*The Sanitary Record,* London, Vol. xxxiii: "The Royal Commission appointed to inquire and report on the relations of human and animal tuberculosis have issued an interim report—the main points to be elucidated in the course of the inquiry were: (1) Whether the disease in animals and man is one and the same; (2) whether animals and man can be reciprocally infected with it; (3) under what conditions, if at all, the transmission of the disease from animals to man takes place, and what are the circumstances favorable or unfavorable to such transmission. The greater part of the above reference is directed to the view which had been expressed that the bacillus which gives rise to tuberculosis in the bovine animal is specifically distinct from the bacillus which gives rise to tuberculosis in the human being, and that, therefore, the presence of the bovine bacillus in the milk or flesh of the cow, consumed as food by man, is not to be regarded as a cause of tuberculosis in the latter. To this point the commissioners first turned their attention. The results which have thus been obtained are so striking that the commissioners felt it their duty to make them known, without further delay. They defer to a further report all narration of the details of their experiments (and up to the present time they have made use of more than two hundred bovine animals), as well as all discussions, including those dealing with the influence of dose and of individual as well as racial susceptibility," etc. The results arrived at are "that tubercle of human origin can give rise in the bovine animal to tuberculosis identical with ordinary bovine tuberculosis, which seems to them to show quite clearly that it would be most unwise to frame or modify legislative measures in accordance with the view that human and bovine tubercle bacilli are specifically different from each other, and that the disease caused by the one is a wholly different thing from the disease caused by the other." "In a future report they will discuss the relative degrees of danger of infection from the consumption of the milk and of the flesh respectively of tuberculous animals, the degree of protection afforded by cooking, etc." * * * "The human side of the question will have to rest mainly on epidemiological and statistical evidence, since direct experiment on man is inadmissible, but we shall follow with interest that derived from experiments with bovine tuberculosis on monkeys as the animals most nearly akin to man." The experiments of this commission go to confirm the experiments and reports made and given by Salmon, Ravanel and others of this country. (U. O. B. Wingate.)

A New Method of Massage— Prof. F. Hofmeister (*Beitr. z. klin. Chir.,* XXXVI, p. 526, 1902) uses an iron cylinder 50 cm. deep which is half filled with mercury into which the patient rythmically dips his hand as deep as his strength will allow, the patient being seated on a low stool. All wounds of the member are carefully covered with zinc oxide plaster to prevent absorption of the mercury. To prevent the adhesion of globules of mercury to the skin, the surface of the metal is covered with a layer of 30% spirits to the depth of several centimeters. The effect on swellings is very marked.

(G. P. B.)

Removal of Semi-Circular Canals—RICHARD LAKE (*Journal of Laryng., Rhin., and Otol.*, July, 1904) reports an interesting operation for the "removal of the semi-circular canals in a case of unilateral aural vertigo," in a woman of 21 years who was subject to frequent recurrence of this symptom for 5 years. The test for hearing showed Rinne increasingly negative for low pitched fork. The operation consisted of an ordinary radical mastoid opening with the exception that the "innermost portion of the posterior wall was not removed"—but the outer wound was so enlarged with a chisel that its long diameter was downwards and forwards. The burr was used for exposing the outer surface of the external semi-circular canal, this was followed, and when the superior canal was brought to view both were removed. The posterior rim of the external canal was then followed until the posterior canal was brought to view, the whole being removed with the burr. The patient suffered severely from shock, lasting an hour, and for 48 hours lay on her right side with thighs on abdomen and leg on thighs, in the position common to cerebral irritation. The eyes were tightly closed, though rhythmic movements of eyeballs were pronounced.

The wound was dressed on the third day. The eyes were opened occasionally, though the movements of the eyeballs upwards and downwards and laterally persisted for 4 days. She was allowed to sit up on the 7th day, and on the 10th was able to walk with assistance; on the 14th she could walk without assistance—though she could only turn to the right without falling. At the end of 4 weeks she was able to walk without falling. There was no return of the vertigo, although tinnitus, which had previously been noted, was not relieved. (H. B. Hitz.)

Physical Degeneration—*The Sanitary Record*, London, vol. xxxiii.: "Every one is familiar with the story told in connection with Dr. Samuel Johnson's famous remark regarding oatmeal in his dictionary—'used as a food in England for horses, and in Scotland for men.' 'Ay,' responded the ready-witted Scot, 'but where will you find such horses and such men?' But now one cannot with such confidence claim oatmeal as the staple diet of the Scotch. Among the upper and middle classes it is still in almost universal use, but its use is disappearing among the working classes, who seem to prefer bread, bacon and other substitutes, with a great excess of cheap tea —foods which do not possess the same bone and muscle-forming properties. In this connection it is somewhat surprising to find certain English doctors denouncing oatmeal as the curse of Scotland, and attributing to its use the rickets which so sadly disfigure many of the working-class children in some of the big Scotch towns. It is not the use, but the non-use, of oatmeal that is mainly at fault; and, so far as the rickets of Glasgow children in particular are concerned, the old explanation is probably the true one, that they are due to the absence of bone-forming lime in the otherwise excellent Loch Katrine water, which is the source of the city's supply. No, what the working classes chiefly want is proper instruction in the most serviceable diets, and how to cook them, particularly for school children. The mischief to a child's constitution often commences in infancy from improper feeding. If the diet is properly attended to, from infancy upwards, there should, in the case of ordinary healthy children, from a healthy stock, be no danger of degeneration of the physique. Of course, the other essential to all healthy life, pure air and plenty of it, cannot be neglected." (U. O. B. Wingate.)

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ORIGINAL ARTICLES.

IMPORTANCE OF THE EARLY REMOVAL OF ALL NEOPLASMS WHETHER MALIGNANT OR BENIGN.*

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It is only within a comparatively short period of time that the profession has awakened to the importance attached to the early removal of all neoplasms, whether malignant or benign. It has been too much the habit in the past to watch the development of a tumor until its malignancy was assured, and then perhaps, after regional invasion has taken place, advise its removal. With our present knowledge of the pathology and clinical behavior of malignant processes, we know that such a course must be followed by the sacrifice of many lives that might be saved by early radical measures. Our text books with few exceptions, fail to impress their readers with the importance of the subject, and it is only by consulting the literature as found in monographs, journal articles and reported cases, that the true significance of the subject is obtained. With the view of showing the trend of opinion through recent articles and reports, together with the report of a few cases that have come under my own observation, the preparation of this paper was undertaken.

To comprehend the possibility of transformation of a benign into a malignant growth, necessitates some conception of the philosophy of tumor origin and development. Our positive knowledge in this direction lies well within clearly defined limits. Cohnheim's theory of the embryonal origin of tumor matrices, while not capable of ex-

*Read before the 58th Annual Meeting of the State Medical Society of Wisconsin, Milwaukee, June 23, 1904.

plaining everything in connection with the origin and development of tumors, affords today the best working hypothesis and has steadily gained ground until it is now accepted by the majority of pathologists. This theory, as you well know, implies a congenital matrix of immature embryonic cells for every tumor. As pointed out by Senn in his admirable work on The Pathology and Treatment of Tumors, this could hardly explain the development of a malignant growth in cicatricial tissue the result of a burn or other trauma. Senn, therefore, suggests that in the process of repair, some superabundant cells that stop short of maturity in their proliferation, may become buried in the scar tissue to lie there dormant as a *post natal* matrix until stimulated into activity by some intrinsic or extrinsic influence.

He says: "We must take it for granted that in such tissue, cells or groups of cells have failed to undergo transformation into mature tissue and that they perform in the production of tumors the same rôle as the congenital matrix of embryonic cells of Cohnheim. In the absence of a more plausible theory, the writer is forced to conclude that every tumor is the product of tissue proliferation of a congenital or *post natal* matrix of embryonic cells, aroused into activity by a general or local physiological stimulation, or by congenital or acquired abnormal conditions in its immediate environment." (Pathology and Treatment of Tumors, p. 27.)

For our purpose today in dealing with a practical phase of the question, we do not need to go into the realm of speculation or hypothesis. We know it to be a clinical fact that actual transformation of benign into malignant growths does occasionally occur, and that, as has also been pointed out by Senn, the tissue of a benign growth may form a *locus minoris resistentiae* for the engrafting of a malignant process without an actual transformation of tissue. We know further that there are certain forms of tumors, as those occasionally occurring in the parotid, the hypernephromas and others, which it is impossible clinically to classify, as well as many in which a differential diagnosis between benign and malignant development is impracticable before the removal of the growth.

Aside from the liability of transformation of benign into malignant growths, other degenerations and complications may develop, having the same intrinsic tendency to destroy life, and which as urgently demand removal. Nothing is lost and much may be gained, therefore, by the early removal of all neoplasms.

In looking up reported cases in the literature of the subject, it is found that by far the most frequent transition of benign into malignant growths occur in tumors of the uterus.

Ellice McDonald (Journal of the Amer. Med. Assoc., May 21, 1904), contributes an article entitled "Complications and Degenerations of Uterine Fibromyomata." In reviewing the literature he tabulates 205 cases reported by A. Martin; 258 cases by Chas. P. Noble; 100 cases by C. J. Cullingworth; 100 cases by Mary Scharlieb and 125 cases by C. C. Frederick. Of these he says: "Combined, these make 788 cases available for classification as to degenerations. There is some slight difference in the classifications of the five writers, but by taking certain liberties with their tables, the degenerations may be summarized as follows:

Fatty degenerations	7
Associated Syncytioma	1
Calcareous infiltration	11
Myxomatous (edematous)	8
Cystic degeneration	34
Necrosis	55
Telangiectasis	46
Associated carcinoma cervicis	15
Sarcoma	17
Associated carcinoma corporis	17

In the same article is quoted the published report of 33 cases of fibroid tumor by Baker and Graves (2) in which 3 were sarcomatous. He also reports 280 cases of fibromyomata occurring in seven years service in the Albany Hospital. In this series 6 were associated with adenocarcinoma of the body and 2 with squamous cell carcinoma of the cervix and 3 with sarcoma.

The paper above quoted was read before the Philadelphia Obstetrical Society. The discussion was opened by a paper by Dr. Charles P. Noble (3) on The Treatment of Fibroid Tumors of the Uterus. Dr. Noble reports a personal experience of 278 operations on patients having fibroids, a table of the complications and degenerations found in this series is as follows:

"In 180 cases complications or degenerations were present, and in 98 cases no complications or degenerations were recorded. There is no doubt that a good many of the simpler complications and degenerations were not recorded, more especially in the early work. This applies more particularly to edema and to myxomatous degeneration of tumors. These cases were looked upon at the time as instances of soft fibroids and no note was made of their pathologic conditions."

The table he gives is as follows:

Celiotomies	225
Vaginal hysterectomies	7
Vaginal myomectomies	36
Total	278

Complications and degenerations in this series are as follows:

Adenocarcinoma of body of uterus	6
Epithelioma of cervix uteri	4
Epitheliomatous infiltration of fibroid tumor arising from adenocarcinoma of corpus uteri by metaplasia	1
Sarcoma	2
Choriocpithelioma	1
Myxomatous degeneration of tumor	6
Cystic degeneration of tumor	7
Calcareous infiltration of tumor	6
Necrosis of tumor	18
Twisted pedicle, pedunculated tumor	2
Intraligamentous development of fibroid	19
Procidentia of uterus	5
Retroversion of uterus	4
Papillary carcinoma of both ovaries	1
Ectopic pregnancy	3
Dermoid cyst, bilateral, umbilical hernia	1
Dermoid cyst, suppurating sinus through abdominal wall	1
Dermoid cyst with twisted pedicle	1
Dermoid cyst	1
Ovarian cyst with twisted pedicle	1
Ovarian cyst, suppurating	1
Ovarian cyst, bilateral	2
Ovarian cyst, unilateral	22
Cystic degeneration of ovaries	5
Abscess of ovary	1
Parovarian cyst	2
Pyosalpinx, bilateral	9
Hematosalpinx	1
Pyosalpinx, unilateral	4
Hydrosalpinx, bilateral	10
Hydrosalpinx, unilateral	8
Salpingitis, bilateral	2
Salpingitis, unilateral	10
Abscess of broad ligament	1
Appendicitis	10
Total	180

Adding the series of cases of Martin, Cullingworth, Frederick, McDonald, Hunner and others, to his own he presents a table of 988 cases with the following per cent. of complications and degenerations:

Sarcoma developed in	1.5
Adenocarcinoma of the corpus uteri	2.5
Carcinoma of the cervix	1.0
Necrosis of the tumor	6.1
Cystic degeneration	3.4

T. S. Cullen (4) reports several cases of sarcomatous degeneration of fibroids that have occurred at the Johns Hopkins Hospital. He says: "Histologically these growths are found to develop from two sources:

1st, The connective tissue;

2nd, The uterine muscle.

Those of connective tissue origin may consist

(a) Of spindle-shaped cells;

(b) Of round cells.

"In those derived from the muscle, a direct transition from the muscle fibres into sarcomatous ones can be followed. Several such cases have been noted at the Johns Hopkins Hospital."

"The clinical history is rather significant: A myomatous uterus has lain comparatively dormant for several years and the patient comes with a history of rapid uterine enlargement within the last few months. If the myoma has been submucous, portions have from time to time been expelled 'recurrent fibroid' and there is a free offensive discharge."

Alban Doran (5) reports a case of uterine myoma in which there was beginning sarcomatous degeneration in a woman aged 31. After a full history of the case, with reference to similar instances, and drawings of microscopic appearances in his case, he says: "At first the elements of plain muscle cells were developed, and the development proceeded until muscle cells were formed. Later on, following a law well known in relation to tumors of types that border on malignancy, some of the same elements never develop beyond their embryonic stage. This theory would explain the semi-malignant nature of a 'soft fibroid' as well as the nature of a 'fibroid' undoubtedly undergoing sarcomatous degeneration."

David Finlay (6) reports a case of a woman aged 59: "A hard quiescent tumor had existed in lower part of abdomen for 15 years. Rapid increase then took place and the patient died 8 days after admission to the hospital, with acute peritonitis. At the autopsy, a large globular mass was found attached to the uterine fundus by a pedicle, 1 inch wide; the omentum and intestines firmly adhered to this. On the summit were two large nodules behind which the adherent small intestine had become perforated by the new growth. The lower half of the larger tumor presented the ordinary appearance of a uterine myoma with a distinct capsule. The upper half was softened and in its middle was a cavity filled with dêbris. Microscopically two distinct appearances were found: Part of the growth consisted only of small round cells or nuclei, the remainder of small

spindle-shaped cells. Pathologically the disease had been produced by a sarcomatous proliferation in the nuclei of the non-striated muscle fibre."

Ehrendorfer (7) relates a case of primary carcinomatous degeneration of a uterine myoma which is accompanied by a careful description of the microscopic appearance in proof of the fact that benign growths may undergo malignant degeneration.

Goubarof (8) observed a fibroma of the vagina which degenerated into a sarcoma in a woman aged 46. The tumor had existed for 18 years but was always small until it commenced suddenly to grow rapidly. It was removed and the microscopic examination revealed fibrous tissue which contained abundant thick, round and fusiform cells with thick nucleus occasionally having nucleoli.

Schroeder (9) quotes 18 cases of myosarcoma under the title "Sarcoma of the Parenchyma of the Uterus," and while recognizing that the malignancy may be primary, states that it not infrequently proceeds from metamorphosis of a common fibromyoma, being less restricted to later life than is carcinoma of the familiar type.

Of the 18 cases, one was young, 2 were between 20 and 29 years; 5 were between 30 and 39; 8 were between 40 and 49; 1 was between 50 and 59, and 1 over 60.

The following well marked case occurred in my own practice, and with Noble I believe that if every fibroid removed were to be carefully examined, we should all have more cases to report in which transformation had taken place.

Miss M. C., age 39, was admitted to St. Mary's Hospital, Aug. 12th, 1901. Family history negative. The presence of a somewhat rapidly growing myofibroma of the uterus had been discovered more than twelve years previous, with a history of hemorrhages. About two years later the appendages were removed with the view of checking the hemorrhage and possibly arresting the growth of the tumor. This seemed to have been accomplished, the patient remaining in a fair state of health for years. For something more than a year before her admission to St. Mary's Hospital, however, she had noticed an increase in the menstrual flow, a profuse watery vaginal discharge, emaciation with more or less pelvic distress. The tumor again began to grow rapidly, the abdomen became very tender to the touch, a daily rise of temperature occurred, sometimes reaching 104 degrees F. The patient now had well marked chills at irregular intervals, with dry tongue, sweating and well marked symptoms of sepsis. With but faint hopes of affording relief an operation was undertaken. Abdominal section disclosed the fact that the tumor mass had undergone malignant degeneration with extensive necrosis. No attempt at its removal. The patient died a few days later. Microscopic examination showed the tumor to be a fibrosarcoma undergoing necrotic degeneration.

The conclusions which are forced upon us by this study of reported cases are:

1. That women suffering from fibroid disease of the uterus, incur a greater risk in allowing it to remain than in having it removed by a competent surgeon.

2. The fact that adenocarcinoma of the body of the uterus occurs much more frequently in cases of fibroid tumor than does cancer of the cervix, leads us to believe that there must be a direct causative relation between fibroid tumors and cancer of the body of the uterus.

3. Every fibroid tumor removed should be subjected to careful laboratory study, no matter what its gross appearance.

I wish in this connection to report a case of carcinoma in connection with dermoid cyst of the ovary.

Mrs. B., age 54, admitted to St. Mary's Hospital, Feb. 8, 1904, giving the following history:

Married 20 years; was never pregnant. Menstruation normal as to time, but for several years had been too profuse. A small abdominal tumor had been known to exist for years. It had grown very slowly, caused no discomfort and she was therefore encouraged to allow it to remain. Six months before her admission, the general health began to fail. There developed a marked pallor; quite rapid emaciation with almost constant abdominal pain. The upper part of the tumor situated just below the umbilicus, was hard and composed of large nodules or multiple masses, while fluctuation was distinctly evident in the pelvic portion of the tumor. There was an evening rise of temperature of about 1 degree.

Abdominal section revealed a large dermoid cyst of the right ovary, the upper portion of which was very thick and adherent to intestine and omentum, and evidently infiltrated with a malignant growth. The small bowel had become involved to a degree that made the resection of two portions necessary in the removal of the tumor. End to end union was made by means of the Connell stitch. The patient made a slow recovery and left the hospital March 22nd, but died eight weeks later from a recurrence.

Microscopic examination proved it to be a carcinomatous development in the upper portion of the cyst.

The transformation of dermoid tumors into carcinomas does not appear to be extremely rare.

H. Graff (10) reports the transformation of a retrorectal dermoid into adenocarcinomatous degeneration, in a woman aged 34. It was removed, complete recovery taking place in four weeks. Six weeks later, however, patient had pain and swelling in the cicatrix and an indurated nodule could be felt. Radical intervention was impossible and the patient died two months later.

Histologically, it was a dermoid cyst, the glandular elements of which were the seat of cancerous degeneration. The regressive mucous and calcareous degeneration was particularly marked.

Wolf (11) reports the case of a laborer who presented a dermoid in the sacral region which was extirpated. Microscopic examination showed nothing but simple dermoid tissue. Six months later a tumor was present in the scar, which proved upon removal to be carcinomatous.

Yamagiva (12) reports a dermoid cyst of the ovary with formation of carcinomatous growth with glandular metastasis.

Biermann (13) reports the case of a female aged 21, who for 4 months complained of pain in an abdominal tumor which had been steadily enlarging. Clinical diagnosis of carcinoma of right ovary was made. Later there followed hydrothorax, ascites and death.

Autopsy.—Large dermoid cyst of right ovary combined with teratoma. The teratoid infiltration had undergone cancerous degeneration as shown by microscopic examination.

Krische (14) speaks of the literature which treats of dermoids, atheromas and teratomas that underwent carcinomatous degeneration and quotes 27 cases which he found recorded.

In a case in which I removed a large dermoid from the right ovary in a middle aged woman, carcinoma developed in the scar of the abdominal wound three months after a seeming complete recovery. The development was very rapid and destroyed the patient in a few weeks.

Tumors of the female breast afford a field of the greatest interest to both the general practitioner and the surgeon. A grave responsibility rests upon the family physician who is first called upon to advise in these cases. Differential diagnosis between benign and malignant growths in the breast is not always easy, and is in many instances impossible before their removal. The questions of the most vital importance are: What proportion of these tumors are primarily malignant? What proportion that are primarily benign possess the inherent possibility of becoming malignant, and when shall operative measures be advised?

Senn (15) quoting Billroth, states that of 440 tumors of the breast, only 18 per cent. were of a non-malignant character.

W. Roger Williams (16) estimates that 40.3 per cent. of all carcinomas in females are of the breast.

That a certain proportion of carcinomas of the breast have their origin in non-malignant growths is positively known.

Early and thorough radical measures, while by no means insuring against recurrence, afford the best results that can be obtained

with our present knowledge. With these facts before us it would seem to be our plain duty to advise the early removal of mammary neoplasms.

Geo. F. Shrady (17) in discussing this question, states that the strongest side of the argument for safety is the removal of all growths, whether in old or young. The chances of malignancy or malignant change is very great, and he gives it as his opinion that 90 per cent. of breast tumors in old women are malignant.

Trélat (18) reports an adenocarcinoma of the right breast in a woman of 43 with a co-existing cyst; total ablation of breast. Microscopic examination showed beginning carcinomatous degeneration; proof of possible transformation of certain benign tumors into malignant ones.

Bryant (19) reported adenofibroma, which developed sarcoma in right and left breasts of a maiden lady aged 49. She had noticed a tumor in each breast since she was 16, but which had remained quiescent until three years before, when that in the right breast began to undergo change, which microscopical examination showed to be sarcomatous.

This author concludes: "The case shows the importance of the early removal of tumors and the relation between sarcomatous and adenoid growths."

Haward (20) relates the case of a woman aged 39, with an adenoma in upper portion of right breast which, after 9 years developed into carcinoma. Eleven months after the removal of the breast, two nodules appeared and were removed in the region of the scar. This author stated that it seems probable "that if the adenoma had been removed when first seen, the subsequent cancerous invasion might have been avoided."

Brandt (21) in the study of benign tumors of the mammary gland, believes that malignant degeneration may take place in them, but only with great slowness. He thinks, however, that most breast tumors should be removed as a matter of wise precaution.

Duplay and Reclus (22) state that fibromas are liable to sarcomatous transformation, and that very frequently the ablation of a fibroma has been followed by a sarcoma. They also state that: "There is in reality no absolute benignity and malignity." Adenoma and fibroma very often show a malignant tendency. In cases of adenoma, the lesion does not progress as long as the glandular walls resist. If the resistance ceases, the cells escape and epithelioma is formed.

Herbert Snow (23) in speaking of adenofibroma or cystic-fibroma of the breast says: "The connective tissue framework of the breast slowly undergoes hypertrophy to an enormous extent. Within the

brawny mass thus formed are enclosed the normal glands, acini and ducts; the epithelium of these undergoes mucoid degeneration, and the lymph channels being obstructed, very numerous cysts are developed. Each of the cysts is an adeno-fibroma, is practically a cancerous lesion on a minute scale, and precluded from any rapid diffusion by the thick walls of fibrous tissue which envelop it. The epithelium continues to proliferate actively, most of the new cells undergoing conversion into mucoid fluid. In the end, however, they gain access to the environing connective tissue and infiltrate this; speedily also producing metastatic deposit in the axillary lymph glands. The tumor is now to all intents and purposes a carcinoma, destroying life with exactly the same phenomena, clinical and pathological.

In practice, all tumors within the mammary parenchyma, formed therein after the age of thirty-eight years, must be regarded as either actual or potential cancerous growths, and treated accordingly."

One of the most striking examples of transition from a simple into a malignant growth, is the development of melanosarcoma from pigmented moles. Of all forms of morbid growths, this variety surpasses all in point of malignancy and rapidity of metastasis. W. B. Coley (24) in writing upon this subject, reports 16 cases as coming under his observation. In one case upwards of two hundred surface tumors were excised. Internal metastasis occurred in 4 of the 16 cases. In one of these every organ was found involved. He has known of but two cases that were cured by operation. He states that the mixed toxine treatment seems to have no effect in these cases.

Through private correspondence I have been able to learn that of the 12,090 surgical patients which have been admitted to the Johns Hopkins Hospital since it was opened in 1889 until April, 1903, there have been 14 cases of lymphangiosarcoma arising from congenital moles. Some of the moles had just taken on activity when the patients entered, some had been growing a few months and other patients had come in on account of recurrence in the scar after removal. The tumors were all excised at once with a wide area of normal tissue. These patients are all dead, the average duration of life after operation being less than one year. There were three cases of hemangiosarcoma beginning in congenital nevi. The nevi began to grow after the patients were 40 years of age. Two died of internal metastasis after complete excision and the other "is not due yet."

My own experience with melano-sarcoma is limited to two cases, both of which died within a year from metastasis following operation.

Too strong a plea cannot be made for the removal of all congenital pigmented moles and nevi before they take on the aberrant cell activity that characterizes their malignancy.

Lipoma, or simple fatty tumor is looked upon as the most innocent of all forms of tumor growth, and yet evidence is not wanting to show that it may undergo malignant degeneration. Senn (25) says: "Transition into sarcoma is less frequently observed than in any other kind of benign mesoblastic tumors. Myxomatous degeneration of the stroma often initiates the transition of a lipoma into a sarcoma. This transition occurs most frequently in intermuscular lipoma."

Frasier (26) exhibited before the Lyons Medical Society a large lipoma removed from the thigh of a man aged 60. It had grown steadily for ten years. Ten months before removal the growth became rapid. It was a sub-aponeurotic tumor, freely movable and without adhesions. The case was diagnosed lipoma which had undergone sarcomatous degeneration.

Bassin (27) reports a case of lipoma which existed for 12 years; it began to develop suddenly and became transformed into a malignant tumor.

One case of this character came under my own observation several years ago, the case being referred to me by Dr. Wm. Wegge, of Milwaukee. A man 60 years of age with lipoma in left popliteal space which had existed for more than 20 years. A few months before his admission to the hospital, it began to grow very rapidly and had become about twice its former size. Upon microscopic examination after removal, it was found to have undergone extensive myxomatous and sarcomatous changes. The patient remained well a year or more, and was then lost sight of.

Nasal polypi have long been known to possess the inherent possibility of transformation into sarcoma; especially is this true after incomplete and mutilating attempts at removal.

Fink (28) of Hamburg, reports the malignant transformation of benign tumor of the antrum of Highmore in a patient aged 33, affected from youth with obstruction of the right side of the nose. In his 12th year, polypi were diagnosed and operated on from time to time, always with recurrence. Ten years later a protrusion of the upper maxillary region was observed and the nose was found filled with polypi. A great many were later removed. Empyema of the antrum of Highmore was subsequently diagnosed and the sinus was opened, disclosing a mass of tumors. Examination showed them to be carcinomatous. Death followed from cachexia.

Edward A. Ballock (29) in a paper "On the Possibility of Malignant Transformation in Benign Growths," reaches the following terse conclusions:

"1. That benign tumors may undergo malignant degeneration has been accepted as true by most clinical observers and pathologists.

"2. That there is nothing in the modern theory of tumors and tumor formation to contra-indicate the possibility of such a change.

"3. That the facts now on record are sufficient to show that such a change may and does occur, although but rarely.

"4. That the change is more frequent in growths of mesoblastic origin, and more particularly in the so-called uterine fibroids than in any other class of neoplasms."

A paper on this subject could be extended indefinitely, quoting reported cases and the opinions of those in the best position to judge as to the truth of the conclusions just quoted. I have given you nothing new, the object of this paper being simply to enter a plea for the early removal of all neoplasms.

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*During the reading of his paper Dr. Oviatt said: Dr. Welch doubts the statement that there can be a degeneration from benign to malignant growths, and claims that while it may be true that the benign tumor will sometimes show malignant transformation, there was primarily a malignant matrix at the base of it; but clinically we know that it is a fact that the actual transformation from benign to malignant growths does occur.

Discussion.

Dr. H. A. Sifton, of Milwaukee: The presence of any form of neoplasm, whether malignant or benign, is necessarily a perversion from the normal type. Some change must have taken place in the cells of the body to produce a new growth; and this is a perversion from the normal type.

Years ago the removal of one of those growths, whether small or large, was fraught with a certain amount of danger. I can recall very distinctly when 25 years ago a dozen simple ovarian cysts were removed with a mortality of 50 per cent.; but this is not so to-day. The removal of even the largest of these growths in competent hands can be done with a very slight mortality; so that when we know that these growths are a perversion and that they may tend to malignant degeneration, even although they may be benign, and that the mortality resultant upon the removal is very small in their early stages, it seems that there is no room for argument, but to say that they should be removed at the earliest possible date.

Dr. Charles Mayo, of Rochester: Gentlemen of the State Medical Society of Wisconsin: It gives me great pleasure to meet with you to-day, and I am sorry that I cannot fittingly follow Dr. Sifton's remarks upon this able paper. I am sure that those of you engaged in surgical practice appreciate this paper in all its details. Surgeons gain their knowledge by mile posts, which unfortunately, in cases of malignant disease are too frequently gravestones. We have a case of supposed innocent tumor and watch it and advise against operation for the reason that it is of a mild type, and in time it develops a fatal malignancy. There is hardly a surgeon who cannot look back over his own record and say there was a time when a benign tumor which later developed malignancy, could easily and simply have been removed with perfect safety to the patient and without deformity.

I recall in our own practice at least three cases of benign tumor of the uterus which we watched from three to five years preceding the menopause, and the character of these tumors lulled the physician and lulled the patient into fancied security; then after a time, the patients failed to appear, and in the course of from five to ten years all three of them died from secondary complications within from a few months to a year following the removal of the uterus. Yet surely there was a time early in the history of these cases when they could have been operated upon with very little risk to life and very little risk of having secondary complications.

If there is any region in the body from which we could possibly make a protest against the removal of a tumor apparently of slow growth and benign, it is in the mixed tissue type in the parotid gland. I question greatly if I had such a tumor myself, and it had gone on to the size of a small walnut, whether I would accept the change to a condition of paralysis of one side of the face, or keep the tumor. I think I should keep the tumor until I thought its deformity equalled the loss of the use of the muscles of the face; that is the only type of tumor whose removal I would not advise, except in the very early and late stages.

When we come to think of cancer, and why we are operating upon it, there arises the question of the cause of death if death occurs. There are few cases of cancer which in their original location cause death; it is the secondary manifestations, the metastatic conditions, which usually cause a

fatal issue. If there is one particular place where the cancer itself in its original position may cause early death it is in the stomach, where death may be caused by starvation. But in the majority of cases cancer does not in its original location cause death. It may be a secondary manifestation from the hemorrhage, but by the time we get the complications which would produce death, we also have metastatic conditions which would render in most instances its removal a useless procedure.

The next point for us to consider is that most operations upon the far advanced cases of cancer are a disgrace to surgery. They prevent early operations upon other patients. You take the majority of instances of the removal of cancer of the upper jaw and the operation is practically a disgrace to surgery. There is a time in the early history of each case in which there is a possibility of cure, but to take these far advanced cases and operate upon them does not aid in getting other patients similarly affected to seek surgical relief at a period when one could offer them some hope of success.

The question of progress in surgery comes up too. Quackery only disappears as we try to get in advance of it ourselves in our operative work. So long as we surgically remove only a little V-shaped piece when operating in certain regions of the body in which early excision of cancer is practiced, like removal of cancer of the lip or cancer of the breast in its early stages, the procedure is not a whit better than that practiced by the farmer doctor with his green paste of arsenic, and he secures in some cases a better result than we do in meddling with the knife.

Then what has been the progress in the surgery of cancer? For 100 years there was no progress until we learned that it was not the cancer in the original location which caused death, but it was a metastatic growth; that the cancer leaves the original location through the glandular system. And since we learned that lesson our advance in the last 10 or 15 years has been entirely through a study of the lymphatic system, with regard to what areas would be drained by the lymphatic system of any part of the body. So that now an operation for the removal of a cancer means a removal of the glands which are tributary to that area in which the cancer is located; the means of getting ahead of the paste man in cancer of the breast is to remove all of the glandular tissue; in cancer of the stomach, the internal organs and the rectum, the procedure now is not only to extirpate the cancer but to remove all the lymphatic system which might be involved and in which we would be sure to get our secondaries. As the fundus of any organ contains but little lymphatic tissue, cancer is of slow growth there. Cancer of the neck, on the other hand, quickly invades the lymphatic system. In cancer of the uterus we get good results from early operation. Look at the results of operation in cancer of the neck and cervix performed too late! We then have a very high degree of mortality following complications arising from metastatic invasion of the surrounding region.

I do not think that I can add anything to this paper, excepting that we must all take these ideas home with us and consider how far we are justified in telling any person who has a tumor, that it is benign when it means in his case that he will be lulled into a sense of security, and that he may not again see a physician until a time when, as is frequently the case, there has developed a malignant degeneration from the chronic irritation.

Dr. H. Reineking, of Milwaukee: I will not delay the Society with further discussion. I will simply say that in my opinion and according to my experience, the correctness of the position taken by Dr. Oviatt and Dr. Mayo cannot be doubted, and the ground has been well covered.

Dr. A. H. Levings, of Milwaukee: I should like to take the negative of this question, as I think the proposition that all neoplasms should be removed at once would put us back in our teaching at least 100 years. The decision as to whether a neoplasm should be removed or not, should rest upon its histology and upon its location and possible effects by pressure.

Now, the Doctor has given us a good many statistics, some of which he has confused, in that he has spoken of the conversion of benign growths into malignant, as a degenerative process, and of mixed tumors and metaplasia as like conditions. Now, pathologically, I think we should understand, and it is a fact which I believe no one can question at this time, that we have a great many mixed growths, some of which are just as truly malignant as though they were composed entirely of carcinomatous or sarcomatous cells. These tumors are malignant and were malignant from the very day of their inception; and I wish to protest here against the statement that a tumor may degenerate into malignancy. It never occurs, in my opinion. The cells of a tumor may take on a lower process, lose their power of staining, become liquified or necrosed, but that is not malignancy. When a tumor undergoes malignant change, it is a metaplasia, an active, progressive process and not degeneration; the cells become endowed with greater power of multiplication and with greater though perverted vigor; it is the opposite of a degenerative process. I would like to call the attention of the society to a statement of Dr. Fuetterer, of Chicago, who has had perhaps as large an experience in the examination of malignant tumors as any man in this country, and he reported at the Atlantic City meeting last month that he had encountered seven cases in his experience in which there had been a metaplasia of benign tumor cells into malignant cells—but seven in an enormous experience. Dr. Beffel, of Milwaukee, who has had a very large experience in the examination of tumors and in the making of post mortems, has had but a single instance of this change, and that was in one of my own cases, where he could trace the muscle cells of a myoma going over into sarcomatous cells. This is entirely different from a mixed tumor and from degeneration.

In regard to the removal of all tumors, would the Doctor advise the removal of all lipomata? As far as I know a fatty tumor has never been known to undergo metaplasia or take on malignant change, and we all know that some people have a dozen and some a hundred. I have one patient who has over 200 lipomata.

Dr. Keen, at the Atlantic City meeting, advised the removal of moles under certain conditions. Dr. Bevan, in the discussion of that paper, said that two of his assistants came to him and each of them requested the removal of a mole, and that he (Dr. Bevan) replied, "I have a mole, too; I will remove your moles if you remove mine." They stripped for the operation and found that each had from 50 to 60 moles! As a result they decided to keep their moles. I know people who have innumerable moles on the back. Are you going to cut all of their anatomy to pieces? In my experience I have encountered but one mole that underwent sarcomatous change. The patient is still living after operation, but there has been a recurrence.

The point I wish to make is that the conversion of a benign into a malignant tumor, so far as pathology teaches us at the present time, is a very rare process.

Dr. G. D. Ladd, of Milwaukee: It seems to me that every point here should be brought out. There is one that I want to call attention to, and that is the effect of these small, benign growths on the patient's mind. If they are not distressed about them and not constantly thinking of them, many of them may be let alone, but I think this point should be well considered. You can easily take a mole out, tell the patient it was not cancer, and it will never return. Their minds will be relieved, and I think this is a sufficient ground for operation.

Dr. W. E. Durr, of Milwaukee: The question of the removal of tumors in the so-called primary stage, is an exceedingly important one. We have heard much concerning the advisability of so doing.

It has been stated that all benign tumors should not be removed, since in a large number of cases only seven cases had been known to have undergone a transformation from the benign into the malignant form. This would seem to furnish sufficient evidence for the early removal of tumors, especially the seven quoted.

It has also been stated that tumors should be removed upon an histological basis only, which means a microscopical examination of tumors. It might, therefore, be considered advisable to remove the tumor, and then examine it microscopically to determine its character. No harm, certainly, can be done by the early removal of tumors.

We do know that apparently simple, benign tumors have taken on a malignant form; the pigmented mole has undergone transformation, has become a melano-sarcoma.

The presence of a tumor, however benign it may seem to be prior to a microscopical examination, is certainly an abnormal condition, and the patient should be most carefully informed of the possibility of the transformation of that benign tumor into a malignant type, and the early removal of the tumor forcibly advised.

Dr. I. D. Mishoff, of Milwaukee: The statistics remind me of a story of an Irishman who was brought to court to be tried for theft, and they had three witnesses against him who detected him in the act of appropriating other people's goods; and when the judge asked Patrick what he had to say in his own defense, he said, "Your honor, I don't want to be convicted because of three witnesses who saw me; I can bring 300 witnesses who did not see me steal the goods."

I believe even in the light of our statistics that if there is ever any malignancy in the growth it has existed from the very beginning. Give the benefit of the doubt to those who claim that a benign tumor can become malignant. Now, how many cases have they seen compared to the whole number of cases in which a benign tumor has changed into a malignant one? Many men, with growths on their bodies of which they are actually ignorant, die of other causes.

Our statistics also tell us another thing, that after an operation for supposed or actual benign tumors, malignant tumors may develop in the cicatrix. If we could only cut down deep enough into the tumor without injuring the

patient, we could determine microscopically the character of the cells, but that is usually not possible. Then we get a sudden impetus in growth, which in my opinion means that something malignant which has been in the tumor from the start, has begun to develop; so I conclude that a radical operation is only necessary to those who insist upon having it.

These statistics are just as valuable as Patrick's witnesses, and are just as illogical.

Dr. Oviatt (closing)—I do not feel like splitting hairs with Dr. Levings in regard to the histology of tumors. Whether the uterine myofibroma has primarily a matrix of malignant growth in it or not, does not change the basis of my argument that it should be taken out; because we do not know whether it is there or not, and we do know that clinically a certain portion of those cases do show malignant behavior afterwards. So, unless we can be informed in some way as to which tumors are going to take on a malignant character, and which are not, I think the safest way is to remove them all.

Dr. Levings says he does not know of a fatty tumor that ever became malignant. Several such are recorded in my paper, but I did not take time to read them. One was my own. A case referred to me by Dr. Wegge of this city, of fatty tumor occupying the popliteal space for 20 years without trouble, began to grow and become painful, and upon removal showed a distinct myxomatous degeneration, if you please, a lipo-myxo-sarcoma. A number of such cases have been reported—so I think even the innocent fatty tumor may be potential for evil.

In regard to the removal of moles, I do not believe the multiplicity of the tumor in any one individual has anything to do with the advisability of leaving or removing them. We were not dealing with the contraindications to operations at all. We simply know that occasionally a pigmented mole develops the most violent form of incurable malignant disease of which we have any knowledge; and if I had 50 of them I would have them all out, and Dr. Levings can wear his if he wants to.

I think the point Dr. Ladd made is excellent. We all know that a woman with a fibroid, perhaps not growing, is living under a Damocles' sword, so to speak. She will bother her doctor, will come to him repeatedly for examination; she knows she has something there she ought not to have, and those women are benefited in more ways than one in getting rid of their growths.

INTERMITTENT CLAUDICATION AND ANALOGOUS PHENOMENA (ANGINA PECTORIS, ETC.)*

BY ARTHUR J. PATEK, A. B., M. D.,
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In presenting this paper to you I am actuated by two motives, one—the report of a rather infrequent symptom group that occasionally attends a disease of great frequency, general arterio-sclerosis, but more often exists independent of it; the other—to dilate in some detail upon the more recent inquiries into the causation of stenocardiac attacks—of which angina pectoris is the best known type. I desire first to present my notes of a case of intermittent claudication, and I trust this unusual condition will prove to be not without some interest.

Personal History: The patient is a retired merchant. Until the age of 60 he was active in business and in fair health. Ever since a young lad he has complained of a weak stomach, but with this exception he has had no illness that may have a bearing upon his present condition. Syphilis and excessive alcoholic indulgences are denied, though I have learned from other sources that he was formerly by no means moderate in the use of spirits. The gastric disturbance has been a source of constant complaint, and is limited to a feeling of distress after eating.

He has been an invalid for several years past, has traveled extensively in search of health, has been to various spas; but his condition remains, with slight exception, stationary, and at present differs but little from that obtaining for several years. The whole picture as presented now has come in so gradual a sequence that it will be quite sufficient to detail existing symptoms.

Status Presens: The patient easily shows his age of 73 years. He is sallow, his skin has a pasty, yellowish hue, and while he seems at times rather listless, his eyes brighten in conversation and his mind becomes alert and active; his temperament—so far as opportunity has been afforded me to judge of it—is a rather happy one; he constantly recalls interesting happenings of his early years, is pleased with happy reminiscences, and enjoys the telling of jokes and humorous events of his life. At the same time, he is rather outspoken and severe with those attending him, though this—I am told—was his habit when in business also. His mind has always been clear, and his memory most

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excellent, nor has this undergone any marked deterioration. Subjectively he complains of gastric discomfort and a rather harassing cough, with some expectoration. In addition he finds walking difficult; his limbs feel heavy, and a dragging of the legs is apparent; there is at times a considerable degree of weakness in the lower extremities, and it frequently happens that, when rising from a sitting posture, he is compelled to take hold of some object or person to prevent his falling. This latter symptom, however, is due—not so much to weakness of the limbs as to a dizziness that comes over him, and frequently his body will sway perceptibly before he finds a safe and firm foothold upon the floor. Then he can usually proceed, though never without the support of a cane. It happens, too, and this is the symptom to which I desire to call attention, that, while walking with comparative ease for a few minutes—he suddenly experiences a sense of weight and a cramp-like pain in the legs; they then give way underneath him and he falls to the pavement, helpless. After a few moments' rest he can rise and proceed. He rarely has more than one such paroxysm, because—knowing his infirmity—he never ventures far from home.

Objectively we find of interest the following conditions: a waxy, sallow complexion and poor muscular development; hearing is dulled; sight is good with the aid of spectacles, bilateral arcus senilis is prominent. Signs of chronic bronchitis with emphysema are present, the latter not very pronounced. The cranial nerves are intact with the exception of the right hypoglossal: the tongue occasionally deviates perceptibly to the left, and is at times complained of as being heavy and unwieldy; this, associated with a weakness of the arms and legs predominating on the left side, indicates the existence of a cerebral lesion, though in the absence of a seizure of any kind, neither patient nor attendants were aware that a hemiparesis existed. Tactile, thermal and localization sense are normal. The knee reflexes are reduced on both sides, ankle clonus is absent, skin reflex normal, pupillary reflexes sluggish. Co-ordination is fairly well preserved, Rhomberg symptom absent. The viscera show the following changes: The heart is somewhat enlarged generally, the mitral systolic sound is indistinct, occasionally lengthening out into a sort of murmur, but the diastolic basal sounds are not appreciably accentuated. The lungs give evidence of a chronic bronchitis with emphysema. The liver is of normal size, spleen likewise. The urine is said to have contained hyaline casts and albumen, but is now free from either of these constituents. The daily quantity passed averages 60 ounces or more and has a low specific gravity.

The radial arteries are hardly more resistant than normal. Pulsation is present in the dorsalis pedis artery, but *absent in both posterior tibials at the internal malleolus.*

The whole clinical picture, with widespread lesions, consisting principally of cerebral symptoms—general and local—and involvement of the heart, kidneys, and to a slight degree the superficial vessels, allows of but one interpretation—a general arterio-sclerosis, or arterio-capillary fibrosis. The one symptom, however, to which our attention is called, is the cramp and loss of power in the lower limbs, coming on without premonition, and of brief duration: this is known technically as "Intermittent Claudication" (limping).

History of Disease: Intermittent Claudication had been recognized as an affection of horses many years previous to its recognition in man. A French veterinarian, Bouley the elder, gave the name in 1831 to a peculiar disease occurring in horses, found to be due to an obliterating endarteritis of the crural vessels. An animal, so affected, trots upon demand, but in about 15 to 20 minutes it limps, stops, and is unable to move, its legs are spread apart, and though urged on, it falls to the ground, rigid and helpless, and in apparent agony. Upon rising it continues to trot for a brief distance, when a similar paroxysm again throws it to the ground.

To Charcot (1) belongs the credit of first placing this symptom-group as it occurs in man upon a recognized clinical basis. In a clinical lecture on "Intermittent Claudication and Diabetes" (2) delivered at the Salpêtriére in 1887 (Lecons du Mardi a la Salpêtriére) Charcot reminisces as follows: "One day—a long time ago—in 1855 or 1856, I was then an interne in the service of Rayer—one of the patients told me that he could walk not longer than a quarter of an hour without being taken with a cramp in his lower extremities; he would rest, then begin to walk, and the cramps would recur. This man died, and I had an opportunity to make an autopsy and account for this bizarre symptomatology of which I had never before heard mention—which shows that one does not appreciate thoroughly all that one sees, for certainly these cases are not very rare; I know to-day of a number of them. The fact is that at the autopsy I found—curiously enough—a bullet encysted in the neighborhood of the iliac artery, which bullet our patient had received at the siege of Alger, in which he had taken part. You see, that was a long time ago, for he died at the age of 56. He had received the bullet in the back, and it was impossible to follow its course. I found it in the abdominal cavity: it had struck the iliac artery, causing a traumatic aneurysm which had obliterated the artery

in its lower part. Collateral circulation had been established, and the arterioles which normally were very small, had become voluminous, and were of such a character that the blood flowed freely when the patient was in repose; but when—and here is the mechanism of intermittent claudication—the limbs were fatigued by walking, the quantity of blood distributed to them was insufficient, a relative ischemia setting in at the moment, this absence of blood causing numbness, cramps, and an inability to continue walking."

It needs the clever observation of one whose watchful eye allows nothing to escape and whose analytical mind interprets logically, to call attention to a condition which, though uncommon, falls nevertheless within the experience of many a physician.

Literature. Charcot found fault with physicians because of their apparent neglect of this affection. He remarks (in 1887): "Curiously enough, though my essay of 1856, presented to the Biological Society, was written not in Chinese, but in French—in good French at that—I have not encountered a single physician who has taken notice of my observations." This was an unjust criticism inasmuch as Leyden had in 1874 taken cognizance of Charcot's observation, and Erb in 1876. Sir Benjamin Brodie, in 1858, described the symptoms of intermittent claudication and referred to them as premonitory signs of senile gangrene. Aside from observations of Charcot's made at various times since his early report, there are a number of other references to this disease. A most exhaustive treatise on the subject has been written by Erb (3), who reviews the history of cases reported, and cites *in extenso* the literature extant; his own personal observations in this report cover 13 cases of which the salient points are detailed. But recently Erb (16) has published a record of 45 additional observations of this disease made since his first series of six years ago. Goldflam reported 6 cases in 1895 (4) and more recently (5) presented a study of 24 additional cases.

A number of others are reported from various foreign sources, making a grand totality of 127, of which number 120 are males.

American literature is apparently very meagre, for I have been able to collect but three cases, one each described by Riesman (6) and Gordon (7) of Philadelphia, and Levy (8) of Syracuse. Gordon's was not a case of pure intermittent claudication.

Symptomatology. The development of the symptoms usually present may be briefly described as follows: paresthesias in the feet; then vasomoter disturbances, such as blueness, redness, pallor or coldness of the feet; next the motor symptoms as described: walking

becomes difficult, it is found impossible to proceed because of a rigidity or painful cramp of the legs: after a period of rest locomotion may be resumed, only to find the paroxysm returning after a brief time.

Although intermittent claudication is a characteristic and frequent symptom of arteritis—this being the pathological condition, as we will find—it may be absent entirely, and the arterial disease be manifested by pain arising spontaneously in a condition of rest, and independent of walking. This pain may be in the calf, along the sciatic nerve, in the sole or toes. Or, there may be but little pain and merely a sensation of weariness and formication. In such cases *the absence of the arterial pulse in the foot is the diagnostic feature.* The symptoms mentioned have frequently led to the erroneous diagnosis of sciatica, neuralgia, and rheumatism. When the arteritis—which is a progressive disease and involves progressively larger areas—has advanced to a marked degree, there will be present—in addition to the typical symptoms—attacks of pain, even when the limbs are at rest. Occasionally the disease seems to arrive at a certain degree of severity and then remain stationary.

My patient has practically no pain while resting in bed, and enforced rest brought on by a most severe attack of sciatica, has put the other symptoms in abeyance. His condition is not progressing.

Objectively, some signs of disturbed circulation are usually present: superficial dilated veins, cyanosis, edema, cutaneous petechiæ, phleboliths and phlebothromboses. The muscles are at times sensitive to pressure, atrophy may take place, and active fibrillary contractions are seen. But more important than these vasomoter and other disturbances is the circumstance that *pulsation of the dorsales pedis and tibiales posticae is frequently either entirely absent, or can be appreciated with difficulty*, and the rigidity of these vessels can frequently be determined. Of the 24 cases reported by Goldflam, pulsation in both dorsales pedis arteries was absent in 13, on one side only in 10, while both were weak in but one case. Both tibiales posticæ were pulseless in 7, one artery only in 8, and in the remaining 9 pulsation was present.

Of Erb's recently reported 45 cases, 30 were bilateral, 15 unilateral. Of the 30 bilateral cases, pulsation in all four pedal arteries was absent in 16 cases, 3 were absent in 2 cases, 2 in 7 cases, and in only one case was the absence of pulsation in a single artery noted. In four typical cases all four arteries pulsated perceptibly. In 13 of the 15 unilateral cases, pulsation was absent in both anterior and posterior tibial arteries. In my case both dorsales pedis arteries pulsate, but the

tibiales posticæ do not. These cases demonstrate the frequent association of this symptom with the disease under consideration, and serve to emphasize its diagnostic importance, more particularly when the unmistakable classical symptoms are not present. In 37 of Erb's second series of 45 cases other unmistakable signs of arterio-sclerosis were in evidence.

While in most cases recorded the symptoms are bilateral, the disease has been encountered affecting but one limb. In these cases the dorsalis pedis and posterior tibial arteries pulsated in but one limb, but where the symptoms occurred symmetrically pulsation was either absent or slight. Because of the fact that the limping is not a constant feature of all cases, Erb suggests a name based upon the clinical and pathological features, "Dysbasia Intermittens Angiosclerotica."

Analogous Phenomena. Weber (9) describes the case of a man whose left common iliac artery was obliterated by accident, and who suffered from muscular cramps in the left leg, but unaccompanied by other features of intermittent claudication.

Nothnagel has described analogous phenomena of the upper extremity.

Charcot called attention to the similarity of the symptoms to those of angina pectoris in sclerotic occlusion of the coronary arteries; in fact, one of the cases of intermittent claudication coming under Charcot's observation, died of angina.

There are cases of milder symptomatology, as we know, due to sclerosis of the coronaries or the first portion of the ascending aorta, in which the symptoms are about as follows: the patient—while walking—is suddenly taken with a pain beneath the sternum, radiating to the epigastrium and into the back, associated with great anxiety. After a rest of a few minutes he can proceed, though there is danger of a repetition upon exertion. A hearty meal may also bring on an attack. These are cases of "angina d'effort" (angina following effort)—with a true claudication of the heart.

J. Schnitzler (12) reports a symptom-complex which he terms "Intermittent Ischemic Dysperistalsis"—an intermittent painful peristalsis on an ischemic basis. The symptoms in his case were those of excruciatingly severe intestinal cramp-like pain, with distension, and without any symptoms of obstruction. The symptoms were found to be due to thrombosis of the superior mesenteric artery, the result of arterio-sclerosis. He draws a parallel between this condition and that of intermittent claudication. Others have since then made similar observations.

Breuer (13) reports two such cases. It is probable that the severe attacks of colic that have been recorded by various observers as symptoms of thrombosis of the intestinal arteries, are in reality to be ascribed to this "ischemic dysperistalsis"—to use Schnitzler's term. Breuer calls attention to the fact that in the reported cases of aneurysm of the mesenteric vessels, and more particularly in the cases of aneurysm of the aorta in the neighborhood of the superior mesenteric artery, there were noted long and severe colic-like intestinal pains. Collateral circulation will—in all such cases—make these attacks infrequent, for a time, but as soon as occlusion of the vessel is entirely or almost established, the symptoms ensue with severity and persistency. We might bear in mind that the pains of syphilitic arteritis are of vascular origin.

There are doubtless other cases of arterio-sclerotic pain that fall in the same category. Breuer cites the case of a patient who suffered severely from renal colic, supposed to be due either to a tumor or hemorrhagic infarct. Post-mortem examination revealed neither tumor nor signs of an infarct, but a marked sclerosis of the renal arteries. Kaufmann and Pauli (14) made a careful study of stenocardiac pains in the epigastrium, and conclude that these cramp-like spasms are not primarily due to a relative ischemia of the part, but that an angiospasm of the partly sclerosed vessel determined the ischemia and pain.

Ortner (15) cites a case of angiosclerosis of the abdominal vessels (abdominal aorta, cœliac axis and mesenteric arteries) with symptoms of angio-spasm—an intermittent claudication of the intestines.

Wagenmann (cited by Ortner) reports having observed with the ophthalmoscope an interesting phenomenon in a patient who had marked general arterio-sclerosis. The patient complained of a periodic clouding of vision, and during such an attack Wagenmann distinctly observed a spasm of the retinal vessels. This may with justice be termed an intermittent claudication of the retina.

Having in mind that claudication seems, thus, to involve various organs, Ortner suggests that Erb's term "Dysbasia" (difficult walking) I. A. be modified to "Dyspragia" (difficult functionating) Intermittent Angio-sclerotica; we may thus speak of a Dyspragia of the extremities, heart, brain, retina, kidneys and bowel.

Causation of Symptoms. Charcot's explanation—and this applies to the analogous phenomena just started as well—that when the limbs are at rest collateral circulation is well established, but when they are put to the exertion of walking, a temporary ischemia of the

part followed by transient muscular spasm and paraplegia, sets in as a result of the sclerotic occlusion of the artery, is generally accepted.

This theory, however, that the arterial disease is the direct and sole cause of the pain and paresis in intermittent claudication as well as in angina pectoris—the symptoms being due to an ischemia of the muscles—a cry for food—is inadequate to satisfactorily explain these phenomena. This is possibly best understood if we call to mind the well known fact that the cases of angina pectoris are numerous in which there is but slight sclerosis of the coronary vessels, and vice versa—that stenosis of the coronary artery has been found in the case of persons never known to have suffered from angina pectoris.

In a number of autopsies made upon patients suffering from stenocardiac epigastric pains, Houchard (quoted by Kaufmann and Pauli (14), found a condition of sclerosis but no anatomical narrowing of the blood vessels, and therefore, he too argued that an ischemia on this basis could hardly be a prerequisite of these attacks.

Weber (9) too—because of reasons mentioned—namely— that there is no constant interdependence of coronary sclerosis and angina pectoris—is disinclined to place credence in Charcot's explanation. He maintains "that muscular cramp does not take any part in angina pectoris or in the phenomena preceding senile gangrene in an extremity, but that cramp is likely to occur in any muscle where an accumulation of waste products takes place, whether this accumulation be caused in healthy animals by rapid catabolism due to excessive exercise (cramps following overexertion as in athletes), or by insufficient removal of waste products in cases of disease due to stenosis of the main arteries and consequent diminution of the blood stream through the affected part."

We are indebted to Nothnagel for a solution that has an air of great plausibility, seems to be well substantiated by facts, and has of late received generous recognition. Nothnagel claims that the symptoms of painful spasm are of arterial origin, that the developing ischemia is due to an arterial spasm, the result of an effort on the part of a diseased artery to supply an increased quantity of blood, and that the pain is in reality a blood-vessel pain. Such an angiospasm would—though the organic occlusion of the vessel be but partial—cause an absolute ischemia of the part nourished, and, as a consequence of this, severe symptoms follow. It is probable, too, that this angiospasm may be transmitted from its seat of origin to other vessels in continuity with it, and thus cause very extensive spasm, pain, and ischemia. This is seen in cases of very sudden death in

attacks of angina pectoris when but a small embolus or thrombus is lodged in a coronary artery, and is evidenced too by the radiation of the stenocardiac pain from the precordium into the vessels of the arm.

These considerations shed light upon the probable causation of this painful spasm—intermittent claudication, that is—arteritis plus arterial spasm, but of even greater interest is the light shed upon the possible causation of the symptoms of that very frequent affection, angina pectoris; certain it is that the cases of sudden death in which but a slight coronary sclerosis is found are numerous, and these, I believe, are best explained upon Nothnagel's theory of angiospasm which produces a relative occlusion of the vessels, and which, because of its transmissibility by continuity, may account for the radiation of the pain into the arm.

Complications: Gangrene and Diabetes. The essential morbid changes that produce the symptom-complex intermittent claudication, being—as has been stated—a more or less complete obliterating endarteritis involving the distal arteries of the foot and leg, and frequently the femorals and iliacs as well, it occasions no surprise to learn that gangrene of the affected extremity occasionally supervenes. This has been frequently encountered, and appreciation of this danger is nowhere better expressed than in Charcot's words: "each time that I saw these symptoms (intermittent claudication) appear, it has seemed to me that I could see beginning the second act of a drama of which one could, as time passed on, detect the evolution." Of Goldflam's 24 cases—7 terminated in gangrene. In these cases the paroxysms were unusually painful. I. H. Levy also cites a case with the same outcome. Charcot and others have called attention to the occasional association of symptoms of intermittent claudication with diabetes. When one recalls the frequency of gangrene—the result of the arterial obliteration—in the latter affection, the possibility of the development of this peculiar symptom group is self evident.

Etiology. Etiologically, the ready inference is justified that whatever causes act in producing arterio-sclerosis elsewhere obtain here too, and so we may include as factors in the causation of this affection: alcoholism, gout, lead, syphilis, tobacco, and exposure, the last three being the prominent factors in Erb's cases, special stress being laid upon tobacco abuse as a cause.

Pseudo-angina pectoris (claudication du coeur, Potain) is commonly known to follow tobacco abuse.

Erb asks the pertinent question (but leaves it unanswered): why —if arterio-sclerosis is so very common—is intermittent claudication so relatively rare, and what is it that determines the development in these cases—as points of predilection—of this sclerosis in the limbs? In one of Erb's cases there was no distinct evidence of sclerosis of the radials, temporals, carotids, or heart. This applies in a measure to the case I report, though it is quite evident from the history and symptoms that the vessels of the internal viscera are affected.

Diagnosis. There are two diseases with which intermittent claudication may at times be confounded, these being Erythromelalgia and Raynaud's disease. Pathologically they are very similar, for all are due in part at any rate to vascular changes, and a thickened intima is constantly found. The difficulty of distinguishing these three diseases is heightened by the fact that their symptoms are often very similar, and because combinations of the affections apparently exist. (Cassirer 10). The case reported by I. H. Levy had vasomotor symptoms suggesting an erythromelalgia.

Mitchell and Spiller (11), in their report upon the microscopical examination of the tissues of an amputated toe from a case of erythromelalgia, report finding, in addition to degeneration of the nerves, marked proliferation of the intima and media of the vessels, and in some sections almost an occlusion of their lumen.

The most prominent symptoms that differentiate intermittent claudication in its pure form from other affections, are *the intermittent character of the paroxysms—absent when the patient is at rest, and produced only by walking—and the absence of pulsation in one or more of the distal arteries.*

The diagnostic importance of the latter symptom is well demonstrated by Erb. Examinations made upon 700 individuals who were presumably not suffering from grave heart or vascular disease, or such conditions as edema, eczema or elephantiasis that would make palpation difficult, indicate that the pulsation of the dorsalis pedis and posterior tibial arteries can normally be felt in 99 per cent. of all cases. It does not follow, however, that the absence of pulsation results in the symptoms mentioned, because appreciation of the pulsation may be impossible and this be due only to a rigid and not entirely occluded vessel; again, even though it be occluded, an established collateral circulation may prevent further symptoms. Furthermore, one of Erb's cases teaches him that the symptom group—intermittent claudication—may be present without the absence of pulsation in any one of the four vessels.

TREATMENT. Intermittent claudication is not a disease *sui generis,* but merely a peculiar clinical manifestation of arterio-sclerosis involving the vessels of the lower extremities. Appreciating its pathology, an early recognition of the import of the symptoms is made manifest, in order to anticipate and prevent if possible, complete arterial obliteration, and forestall a probable gangrene consequent upon such occlusion. That the disease has been insufficiently recognized before such a complication has set in, is undisputed.

The measure of comparative safety lies in the establishment of a satisfactory collateral circulation, or even re-establishing a channel in the occluded vessels—in order to improve the nourishment of the limb. Therefore bodily rest with warmth and moisture is an all-important element. If a suspected or probable cause is known, this must be corrected at once. The diet must be attended to and the personal hygiene regulated.

The use of alcohol and tobacco must be interdicted, and all excesses and abuses avoided. Hydrotherapy, massage and electricity seem to have been of service in some cases. Among drugs, the iodides, vasodilators and heart tonics are indicated. Goldflam found the iodides of questionable value. Theobromin in the shape of diuretin has of late been advocated as relaxing vasomotor spasm, and would theoretically be indicated. In the main, however, one must rely on a therapeusis of general character, not medicinal. When walking is to be resumed it is to be done with the utmost caution to avoid undue fatigue.

Both Erb and Goldflam report cases that were relieved of all symptoms, some in which pulsation returned in the crural vessels, and other cases that were markedly ameliorated. In the case reported above faint pulsation can now be felt in the right posterior tibial.

CONCLUSIONS.

The study of the cases of intermittent claudication thus far recorded justify the formulation of the following conclusions:

1. Intermittent claudication is far more frequent a symptom-complex than generally recognized.

2. It is doubtless frequently and freely confounded with sciatica, neuralgia, and rheumatism.

3. Careful and detailed inquiry into the symptoms which usually come on while walking and are absent when at rest, together with their intermittency, should lead to a suspicion of the diagnosis; this will be made absolute by finding that

4. Pulsation is absent in one or more distal arteries (dorsalis pedis and tibialis posticus) of one or both legs.

5. The pain is of vascular origin and due to an arteritis plus—in many cases—angiospasm of the affected vessel.

6. The various internal viscera may suffer from such an angiospasm when their vessels are sclerosed, the most prominent prototype being the heart in the common condition, angina pectoris.

7. Total occlusion of the vessels, as occasionally found in intermittent claudication, may lead to gangrene of an extremity.

8. Early recognition is essential, in order, by appropriate treatment, to prevent this dire and frequent complication.

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Discussion.

DR. W. F. WEGGE, of Milwaukee—Our thanks are due Dr. Patek for the very thorough manner in which he has treated this subject.

A study of the literature on intermittent claudication and allied conditions shows that interference with a proper blood supply due to a more or less complete obstruction, more or less permanent (and from whatever cause), of the arteries of, or leading to a part of the body may, under certain conditions, the nature of which is not fully understood, lead to symptoms that may be summed up as consisting of temporary loss of function after exertion, together with various sensory and vasomotor disturbances, and a return to apparently normal functionating after a period of rest.

It shows further that in the large majority of the cases this obstruction is due to changes in the walls of the blood vessels, commonly spoken of as arterio-sclerosis.

That the interference with the blood supply is always due to this cause is made doubtful by the first case reported by Charcot (referred to by Dr. Patek) and also by a case reported by Bourgeois in which a traumatic aneurism of the left popliteal artery was the apparent cause and in which a removal thereof was followed by a recovery from the symptoms.

The observation of Nothnagel relating to the case of a young lady in whom a thrombosis of the right axillary artery was followed by symptoms

analogous to intermittent claudication in the right arm, is another case in point.

It would, therefore, seem that the application of the name angio-sclerotic intermittent dysbasia, as suggested by Erb, is hardly appropriate.

The modification of this term suggested by Ortner, is hardly more appropriate, although it covers a much larger group of cases and may be applied properly to many cases of similar disturbances of function occurring in different parts of the body.

In the present state of our knowledge an attempt to improve upon the old appellation, intermittent claudication, as applied by Charcot and confined to cases presenting the symptoms described by him, is, in my opinion, premature.

It also appears absurd to speak of intermittent limping of the heart, or of the intestines, of the arm or of the brain, if you please, as is done by some of the more recent authorities.

I would, therefore, suggest that for the present at least, the term "intermittent claudication" be confined strictly to cases in which the symptom-group occurs in the lower extremities; bearing in mind always that analogous symptoms may also occur in the other parts of the body from similar causes.

The importance of the subject can hardly be overestimated since the appearance of this group of symptoms or a part of them, should put us on our guard, and lead us to inaugurate a course of treatment that in a number of cases has been followed by more or less favorable results; and for the time being, at least, has averted the threatened gangrene which so frequently follows.

The history of the cases reported thus far reminds us again of the baneful effects of alcohol, tobacco, syphilis and exposure upon the circulatory apparatus.

Judging from the histories of some of Erb's cases, I should say that the first crop of cases of intermittent claudication due to the "Kneipp Cure" is about due.

Dr. W. H. Washburn, of Milwaukee—This paper of Dr. Patek's is an able and erudite production, and I hope that the future will see many such presented before this society.

The ground in fact has been covered so fully that the doctor has left very little to be discussed. I note, however, that he has neglected to refer in his summary of the literature to Osler, who some years ago delivered a special course of lectures on angina pectoris, and referred at that time to a paper by Allan Burns published in 1809, in which he described the symptoms of intermittent claudication and compared them with the phenomena of angina pectoris.

The fact that intermittent claudication is not necessarily due to a spasm of the heart muscle, is well brought out in one of the references the doctor has made (I think Weber, in an article in the American Journal of Medical Sciences), and it occurred to me while the doctor was reading this paper, that very probably this explains the circumstance that in cases of angina pectoris we frequently find that the pulse is absolutely normal; that there is no deviation in it whatever from the normal, while the patient is suffering most excruciating agony, the pain being undoubtedly due to angio-spasm.

On the other hand, when muscular cramp occurs, instant death is the consequence. I believe this explains the variations in attacks of angina pectoris in the same subject.

As to the etiology, the doctor has mentioned alcohol as a prominent factor in the production of arterio-sclerosis. But week before last there was a symposium on this subject in the medical section of the American Medical Association, and during the discussion brought out there, Dr. Cabot of Boston discussed the subject of etiology as regards alcohol, and he had in his possession a vast mass of observations of his own upon individuals that were the subjects of chronic alcoholism and in whom no evidences of arterio-sclerosis could be found whatever, and his conclusion was, from his own observation, that alcohol is not a factor in the production of arterio-sclerosis.

I have only one other portion of the subject to discuss, and that is the therapeutics. In a disease so essentially chronic and incurable as arterio-sclerosis, anything that affords any relief from the symptoms is certainly very much to be desired. I think it was about two years ago that I first noticed some articles on the use of Trunecek's serum, which is not a true serum but a solution of inorganic salts in sterile water in about the proportion of salts occurring in blood serum. Trunecek introduced this serum, as he calls it, hypodermatically in doses of from half a cubic centimeter to 5 or 6 c.c., and at variable intervals. During the last two years I have noticed quite a good many reports of clinical cases treated by means of this serum; and if the actual facts are remotely comparable with the statements, we have in this apparently inert serum something that ought to be used freely. Cases of arterio-sclerosis involving the cerebral vessels, or the auditory apparatus, in which there is imminent danger of deafness from arterio-sclerosis, have been relieved, the deafness has disappeared, and the hearing returned, the tinnitus aurium and vertigo have disappeared and anginous attacks have also disappeared. In fact one would suppose, from the recent literature, that we found in this substance a panacea for the ills that result from arterio-sclerosis.

I think that Dr. Patek is to be congratulated on the caliber of the paper he presented here.

Dr. H. B. Sears, of Beaver Dam—I wish but a word or two. Possibly my thoughts may not be pertinent to Dr. Patek's paper. However, I believe the etiological factors of blood vessel disease are related, let the lesion be where it may. The factor or factors determining the location of disease in the cardio-vascular system, are not clear. I have been impressed with the frequency of what has seemed to me to be involvement of the abdominal aorta in cases often classed as grippe. Patients give a history of impaired digestion and defective elimination and complain of abdominal pain which is increased when the body is extended, or when deep pressure is made directly over the abdominal aorta impinging its walls; this pain is often easily traced the entire length of the abdominal aorta and at times extends into the iliacs. This condition occurs in all ages and is associated with catarrhal troubles, and may precede, accompany or follow joint paints or praecordial distress, and is seemingly due to autotoxemia and apparently an endarteritis or arteritis. I have not found that others have had the same experience, and would therefore invite your attention to this matter.

Dr. Patek (closing)—There is very little I would say in closing. With reference to the terminology, I agree with Dr. Wegge that intermittent claudication—the name first given by Charcot to this particular symptom group—is the one with which one associates a claudication or limping of the lower extremities, although the pathological condition of the arteries producing it is similar to that causing angina pectoris; yet the substitution of some term which could satisfactorily cover all cases would certainly be desirable.. It is always unfortunate if any name that has long been associated with a set series of symptoms is made to apply to a wider symptomatology.

I was not aware of the earlier history of intermittent claudication referred to by Dr. Washburn. Concerning Trunecek's serum I may say that I suggested the use of this remedy to my patient, but being unable to promise much relief objection was made to its use. However, the *International Clinics* of last year contains an article lauding the use of this preparation in a varied series of arterio-sclerotic cases.

Referring to Dr. Sears' remarks as to the sensitiveness of arteries, I would remind you of the existence of syphilitic arteritis and the painfulness of this condition, and of acute arteritis, an example of which following I believe, typhoid fever, was recently reported in the Johns Hopkins' Hospital Bulletin.

We frequently meet with what may be called abortive attacks of claudication affecting the heart and large vessels; possibly such attacks are due to the irritation of an auto-intoxication or to an infection that results in aortitis with substernal pains; at any rate, this condition, which is in all cases probably due to a sclerosis, is common in old people. I have at present under my care an old gentleman who has had very marked substernal and occasionally radiating pains with very little sclerosis of the superficial vessels; he is 78 years of age and his condition is doubtless due to an aortic sclerosis which does not at all times cause equally severe pains.

THE THERAPEUTIC USES OF THE ROENTGEN RAY IN DERMATOLOGY.*

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The X-ray is probably the most important therapeutic agent in the history of dermatology; none has attracted more widespread interest and its employment has become indispensable in the work of the dermatologist. Although of recent development it has advanced with such rapid strides that already sufficient material is available to justify certain definite conclusions. Apart from surgery no other branch of medicine has been so favored to reap the advantages of a new therapeutical agent as has dermatology.

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The first therapeutic experiment of the X-ray in dermatology was made in 1896, one year after the discovery of the light by Roentgen, on a case of nævus pilosus, after an accidental discovery that the action of the light produced a falling out of the hair. In 1897 Schiff first reported two cases of lupus cured by the X-ray. Gradually the experimental field was expanded, Hahn first treating chronic eczemas, Freund favus and sycosis, Sjögren epithelioma, etc.

Without attempting to enter on the therapeutic action of the light, it will suffice to state that the histological investigations show a degeneration of the epithelium and its structure, the hair, perspiratory and sudoriferous glands, accompanied by inflammatory reaction, the extravasation of serum and leucocytes from the blood vessels. A bactericidal effect of the Roentgen ray, according to the majority of authors, could not be demonstrated, nor can the inflammatory reaction explain the therapeutic action of the light, as, for instance, the falling out of the hair may be produced without a clinical demonstrable evidence of inflammation. Histologically considered, the indication for the therapeutic value of the X-ray would, therefore, embrace such pathology which mainly involves the epithelial structure, and clinical experience seems to verify this theory.

The diseases of the skin so far most successfully treated are: epithelial new formations, benign and malignant, parasitic diseases, such as sycosis, favus, ringworm, and a third group including lupus, eczema, acne vulgaris, psoriasis, and the like.

During the past two years I have had occasion to treat various forms of dermatoses by the X-ray, and the object of this short treatise is to give a general clinical and statistical resumé of the practical experience of this new therapeutic agent. I cannot attempt to collect statistics from the enormous scattered literature, but must content myself with a brief report of my personal experience during the past two years.

Of the various therapeutic uses to which the X-ray has been applied, its apparent success in the eradication of *epithelioma* and *cancerous degeneration* of the skin designates a remarkable progress in the field of surgery. It has awakened the most widespread interest and gradually has gained the confidence of the profession. My own observation in a rather limited number of cases of this kind, has certainly tended to make me rather enthusiastic in this regard. This is certainly true of the superficial varieties; the majority of these have magically yielded to radiotherapy and recidives occurred in but a few instances. Although in most cases the neoplasm disappeared without inflammatory changes, I found a decided reaction to act fav-

orably towards a disappearance of the growth, and during the last year I push the treatment to the appearance of a slight burn, the healthy parts being, of course, well protected. In this superficial carcinoma we can claim much advance regarding treatment and result over the methods of the past. The largest percentage of these cases as to location occurred on the side of the nose, cheek, forehead, outer canthus of the eyes, and back of the hand. The number of such cases treated were twenty-three, three of which had been previously excised. Where the cancer was situated near the eye or involved the eyelid, I guarded the eye itself carefully against the ray, but although this could not always be perfectly accomplished, I never noticed a deleterious action saving a slight conjunctivitis and keratitis. When first I began the light treatment two years ago, and in order to test the efficacy of the highly lauded treatment, I refrained from any other therapeutic treatment, no matter what appearance the growth presented. Gradually I deemed it advisable and rational to prepare the way for the light by removing, by means of the curette, all scales, crusts and broken down tissue as thoroughly as possible to the healthy skin. The reaction took place in so much shorter time that I have adopted this method in all applicable cases and can highly recommend it.

As highly satisfactory as radiotherapy acts in these "benign" epitheliomata, if I may so express them, its value becomes more doubtful where the lesion is more deeply seated, involving the subcutaneous structures. My experience in such forms of cancer has been so limited that I am unable to draw any inference from them. I have always advised operation in such cases, and only resort to the X-ray in cases of recidives or inoperable cases. One returning cancer of the chest wall, after complete removal of the breast and all glands involved, was treated by me during the past two years, the deep ulcer of the size of a dollar having at one time entirely disappeared for three months. In another similar case, in which innumerable nodules occurred about the line of incision, these disappeared after about ten applications, but a pleurisy, probably due to metastasis, brought on the fatal end. To what extent the metastasis may have been due to the action of the ray can only be surmised.

Many forms of the dreaded rodent ulcer, the "noli me tangere," must now yield to the phenomenal power of the ray. Amongst the number of my cases cured by it, one of them is so eclatant, that a brief description will be proper. The patient is a woman, fifty years of age; general health good and no history of cancer in the family. The rodent ulcer was first noticed ten years ago on the side of the nose, slowly progressing, until, with the aid of irrational treatment

Ulcus Rodens.

with caustic pastes, it gradually involved the entire soft and cartilaginous parts of the nose and the surrounding structures, together with the septum, presenting the appearance as shown in photograph No. 1. A small flap of the ala was over-hanging the upper lip, and when treatment was begun the dimensions were two and one-half by three and one-half inches. After twenty applications of the Roentgen ray, it presented the appearance of photograph No. 2. All secretions have ceased, the edges were of normal tissue, and the area of the ulcer had contracted to a space of one and one-half by two inches, with the flap of the side of the nose again replaced in its natural position. An artificial nose will readily disguise the present defect.

Acne in its various forms has tenaciously resisted the most patient and persistent course of treatment; a perfect and permanent recovery with the ordinary means even of heroic measures has been limited. With the aid of the X-ray a most efficient therapeutic agent plays a most important rôle, and from the goodly number of cases under observation, I do not hesitate to affirm that it will accomplish in a surprisingly short time what customary measures—including surgical—have often failed to accomplish.

Usually acne has been regarded as a reflex phenomenon due to disorders of the digestion and genital apparatus, anemia and so forth, but I have witnessed recoveries in spite of the presence of these conditions and purposely without any regard to alleviate them, all of which would tend to prove that acne is a disorder *per se* to be treated independently of any accompanying disorder. In the whole realm of remedial agents nothing can be compared to the sometimes marvelous efficiency of the Roentgen ray if applied with due precaution. Unlike the X-ray treatment of cancerous and eczematous affections, and with the desire to avoid a burn, a weak, soft light has been always preferred by me with satisfactory results. The acne patients I have to report were forty in number. Among these are included all the varieties, from the simple seborrhoic and comedoform, to those including folliculitis and the furuncular and pseudo-keloid variety. The average number of irridations made once to three times a week were eighteen, the age of the patients varying from fourteen to forty years. The most successful and astonishing cases were found amongst fat and flabby persons of indolent habits, having an excessively oily skin. Beyond a slight erythema in a few cases, at the appearance of which the applications were at once omitted, no disagreeable complication followed. Oftentimes the mildest cases proved most obstinate, requiring as many exposures as aggravated cases. I intentionally refrained from treating the disease by the ordinary methods, in order

to test the efficacy of the ray, but lately I have combined with it some mild applications as usually recommended, resulting in a shortening of the time of treatment. Naturally, proper hygienic measures and such corrections as functional disturbances of the various organs demand, cannot be overrated and should always be an adjunct to the local treatment.

Acne Rosacea does not seem equally well acted upon by the ray, and the ordinary methods or the Finsen light seem to be preferable.

Next in frequency to acne a fair number of various forms of *Eczema* were treated by the ray, particularly those that stubbornly resisted the ordinary methods of treatment, as the chronic infiltrated forms. Ten cases of chronic eczema of the palm of the hands were successfully treated in the above manner, three of which were followed by a recidive which again readily yielded to a few renewed treatments. In one case of eczema ani a mild irridation produced a decided relief from itching and repeated applications effected a cure. Similar good results were obtained in a chronic vesicular eczema of the hands due to a wild ivy poisoning of ten years' standing, in two cases of eczema of the auditory canal, and a number of similar, localized chronic conditions that had baffled ordinary therapeutic measures. In none of the above cases was the irridation carried to any degree of erythema.

In the early part of my work I experimented in a number of cases in treating *hypertrichosis*, but the results were so unsatisfactory that I do not undertake it with any degree of confidence. I have found that the hair would gradually begin to fall out, but that in most cases a considerable hyperemia with consequent scaling would follow, and the hair, after a certain period, would again reappear, although less numerous. In two cases, after repeated regrowth, complete alopecia was accomplished, still the danger to the patient, the discomfort and the time consumed tend to discourage its use.

More gratifying results were obtained in a few cases of *Sycosis* of the most rebellious type, with multiple follicular abscesses. After a few applications the hair begins to fall out, the inflammation disappears with the abscesses and the skin returns to its normal condition. The satisfactory results in these cases must be attributed, I think, not to bactericidal influence of the ray, but to its complete depilatory action. About six weeks after epilation had become complete new hair made its appearance on the affected areas.

The results of treatment of *Lupus* cases have not been so gratifying in my hands as has been generally reported by other observers. Of the four cases of lupus vulgaris, one in a sixteen year old subject, covering the cheek to the size of a dollar, disappeared after ten

applications. A similar one, also in a young person, showed no reaction, although a slight burn was produced, and later yielded to the Finsen light. A third case, covering the entire cheek from eye to ear and forehead to lower angle of the mouth, in a woman fifty-eight years of age, the disease having lasted forty years, was treated until a severe burn was produced which lasted for several months, and finally healed over by means of the Finsen light, showing a very good result. The fourth case is still under treatment; it is more extensive than the last one, involving the neck and ear, but promises a fair result; there is likewise a case of lupus on the lobe of the ear in a young person eighteen years of age. The action of the X-ray on lupus vulgaris seems to vary materially and cases to all appearances alike do not coincide in their results, and in such cases the Finsen light has acted beneficially, sometimes with marvelous rapidity.

With *Lupus Erythematosus* my experience has been somewhat similar; in spite of energetic irridation no beneficial reaction followed until the Finsen light was applied, when a slow but encouraging change took place. Two cases were cured, and one extensive one that promises well is still under treatment. In drawing my conclusions from the foregoing cases I should give preference to the Finsen light in the treatment of both forms of lupus. In this connection I wish to mention one case of scrofuloderma, extending over the entire temporal region to the size of the palm of the hand, in a female thirty-five years of age, which was cured by applications of the X-ray.

My experience with cases of *Psoriasis* is too limited to give any kind of a trustworthy record. I have applied the ray in only a few isolated patches located on the knees and have made the infiltrations disappear without difficulty, so far without a recurrence. Whether this result is more permanent than that produced by the customary methods remains to be established. However, the treatment has of late been highly spoken of.

In *Keloids* and *Cicatrices* the action of the Roentgen ray is a most pronounced one, as the following four cases will show. Case 1. Three keloids about the size of a bean on the back of the hand, produced by caustics applied to warts, entirely yielded to about fifteen applications. Case 2. A similar growth on the bridge of the nose caused in a similar manner melted away with ten irridations. Cases 3 and 4. Scars caused by a burn and glandular abscess appearing on the neck were made to wholly disappear leaving but a slightly reddened and fragmented line. A few warts were beneficially acted upon in like manner.

This concludes the list of dermatoses treated by means of the X-ray. It may in this connection be of interest to mention a few

cases beyond the domain of dermatology which by chance came under my treatment.

Two cases of *tubercular glandular enlargement* of the neck showed a decided diminution in size after a number of irridations and remained reduced. A case of *laryngeal tuberculosis* was treated with negative result; likewise a rapidly growing inoperable *sarcoma* of the thyroid which seemingly enlarged under the treatment. A large inoperable *struma* was similarly acted on without any benefit, both cases ending fatally. A case of excessive *hyperidrosis* of the axilla is at present under treatment with the prospect of a favorable prognosis.

Two cases of *actinomycosis* came under my observation; the first was the case of a woman aged twenty-seven, and involved the tonsils, with swelling and glandular enlargement and severe pains in the ears and head. About ten irridations carefully applied directly to the tonsils produced complete relief and subsequent cure. The second case, which ended fatally, involved the jaw, neck and face, with fistulous openings and a severe purulent discharge. Patient was a farmer, fifty-five years of age. In both instances the ray fungus was demonstrated.

After the foregoing resumé I believe I am justified in drawing the following conclusions:

1. We possess in the X-ray a valuable adjunct in the treatment of dermatoses which bids fair to become indispensable.

2. The unbounded enthusiasm for the results obtained should not blind us to the equally good results obtained by the ordinary and harmless methods; it is a double edged sword, powerful for good or evil, and should not be used in milder affections until milder agents have failed.

3. A combination of the X-ray with the ordinary methods of treatment enhance the therapeutic value of the former.

Discussion.

DR. J. D. MADISON, of Milwaukee: My experience in the use of X-rays in dermatoses is rather limited, but so far as it has gone it coincides quite accurately with that of Dr. Frank. In cases of epithelioma, rodent ulcer and acne, our results have been very good indeed, with perhaps one or two exceptions. I think that it is not necessary to discuss these three diseases at this time, because nearly all the reports upon them are to the same effect, that the results are excellent.

In cases of hypertrichosis I think our results are not so good, and they much resemble those obtained by Dr. Frank. I think, however, if one is patient and persistent that in many cases the desired results may be obtained.

Of lupus I have seen only one case treated, and that only partially; it was a case of lupus erythematosus in a woman. The duration was three years and the diseased area was somewhat larger than a quarter of a dollar, and situated upon the nose. Thirteen treatments of short duration were given, at the end of which time there was a marked reaction, consisting of swelling.

softening, and exudation of serum, and especially remarkable was the action upon the sebaceous plugs. They were easily expressed and were found to be much more extensive than had been supposed. When this reaction had subsided a marked improvement was seen to have taken place. We again started mild treatment, but the patient was pretty well satisfied with the result and discontinued it. I saw her two days ago; the condition is distinctly improved, and we hope to have her go on with the treatment.

With keloids the reports are generally favorable, and that has also been our experience, but we have had one case which was treated for several months, and treated very vigorously, in which the result was only partially good. The growths were rather large and at the end of the treatment they were about one-fourth the size they were when the treatment was started.

In regard to cancerous growths undoubtedly the superficial ones react most readily; but I think it is a very important question to consider, what can be done for the growths beneath the skin. There is a great variety of opinion upon this and the question is not at all settled. Some go so far as to claim that no results can be attained at all. It seems to me that is a mistake and it can be illustrated by a case we still have under observation. The case was one of carcinoma of the right breast of about eighteen months' duration. The tumor at the time treatment was started was about the size of a lemon, and the ulceration was perhaps 2½ by 3½ inches. At the end of a little over one year's treatment, the tumor had largely disappeared, the ulcer had completely healed but there was still remaining a small indurated mass beneath the scar. The patient of course had been advised to be operated on at first—as one, I think, should always do. She then refused operation, but now at the end of a year, with our urging she consented to an operation; and it is in regard to the specimen obtained at that time that I wish to speak particularly. Beneath the scar was the firm, fibroid mass measuring 2x1x½ inches. Cancerous cells were undoubtedly present in the mass, but for a distance of ½ cm. beneath the surface of the skin the tissue was entirely free from them. The mass was made up almost entirely of fibrous tissue, its boundaries were entirely fibrous, there was no attachment to the chest wall, and there was every evidence that its growth had been much restricted. On section, passing in from the periphery of this mass where no cancer cells could be made out, one soon came upon a few scattered groups of cancer cells which increased somewhat in number and were most numerous in the center. A cancerous gland about the size of a hickory nut was found well up in the axilla, and this gland by reason of its position had been but little exposed to the rays. The gland contained a succulent cancer growth which presented a striking contrast to that of the fibroid mass just described. This case well illustrates the fact that though the effect may be not nearly so great upon the cancer tissues beneath the skin as upon superficial growths, there is undoubtedly an effect, and if the growth is brought well within the influence of the rays there is not, judging from this one case, a tendency to spread or increase the growth, but on the contrary a tendency to restrict it, and this offers the hope that in some cases the growth could be entirely eradicated.

I have seen no tendency on the part of X-rays to produce metastasis.

Dr. H. V. Wuerdemann, of Milwaukee: Radio-therapy is turning a portion of the surgeon's work, even the special surgeon's work, over to the dermatologist and electro-therapeutist, for it has been demonstrated to be a

cure for epithelioma, rodent ulcer, superficial carcinoma and superficial sarcoma, and is a valuable adjunct after the radical operation for removal of malignant growths, where the depths of the tissues and foundations of the neoplasm have been exposed by the knife, which may then be subjected to the X-ray and permanently cured. In others, even the most malignant forms, the progress of the case has been hindered and pain relieved. My experience has been limited to cases seen in consultation or treated under my direction by the dermatologist and electro-therapeutist. They comprise epithelioma of the lids (on which I will never operate again) sarcoma and carcinoma of the lids and orbit, and otherwise intractable eczema of the auricle, and malignant growths of the tonsils and larynx.

In support of Dr. Frank's contention as to the efficacy of radio-therapeutics I show photographs of several cases which have been cured or greatly relieved by radio-therapy.

Case 1. *True sarcoma of the lids*, cured by electro-therapy, being a case of Dr. L. Webster Fox's of Philadelphia.

Case 2: *Carcinoma of the orbit beginning in the skin of the external canthus.* Operation: Exenteration of orbit and resection with partial removal of malar, superior maxillary and orbital process of the frontal bones. The patient was treated about two years by X-ray several times a week; a suspicious sore was removed by secondary operation and the result was complete cure with full lining of orbit by skin.

Case 3. Exophthalmus and Proptosis of the Eye.

Case 3: *Exophthalmos and proptosis of the eye due to non-malignant inflammatory hypertrophy and hyperplasia of orbital tissue* complicated by exostosis of temporal bone (of which the nature was unknown as it disappeared under X-ray treatment). Operation: Exenteration of orbit, with resultant recurrence of growth of orbit and disappearance of secondary tumor under radio-therapy.

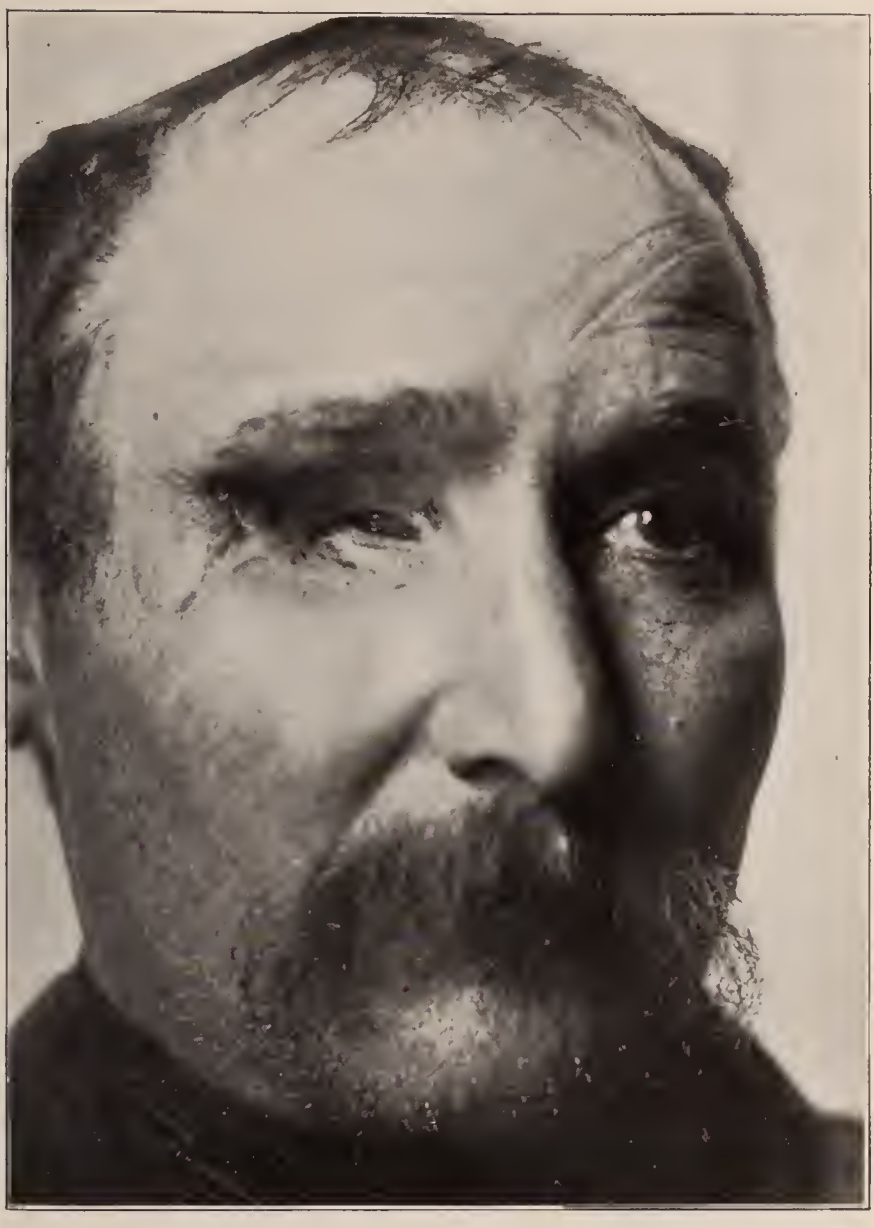
Case 4: *Glioma beginning in the retina and extending to orbit, maxillary antrum and nasal passages.* Operation: Three exenterations of orbit. The case was treated also by X-ray for one year, with a result of hindrance of development and absolute prevention of pain.

Case 1. Sarcoma of the Lids.

L. Webster Fox.

Case 1. Sarcoma of the Lids, after 48 X-Ray Treatments.

L. Webster Fox.



Case 2. Result of Exenteration of Orbit with Partial Removal of Malar Bone, Total Removal Inferior Wall of Orbit for Carcinoma, beginning at external canthus.

Patient treated about two years after operation by X-Ray several times a week. Recurrence in triangular area, outer upper margin. Second operation followed in 6 weeks by complete healing.

Case 4. Recurrent Glioma of Orbit.

Dr. Frank (closing): The experience of Dr. Madison regarding his cases of acne, cancer, etc., seems to coincide with mine exactly, also the case of lupus erythematosus which he mentioned.

The rather poor success he has had with keloids may be ascribed to the fact that the keloid proper is usually not so well affected by the X-ray, whereas the pseudo-keloids and cicatrices of all varieties are easily affected by the ray and cured. I am very much pleased to hear of the good results that Dr. Würdemann has had in the treatment of carcinomas, epitheliomata and sarcomas of the orbit, but as my experience has been very limited in these cases, I can say but very little about them, nor about the deeper seated varieties of these malignant growths.

In my paper I have attempted to emphasize the fact that the X-ray in dermatology will not do away with the ordinary medication and surgical measures usually employed, but that it is very important to combine the treatment in many cases; as for the rest, I refer to the conclusions I have drawn in my paper.

Sewage Disposal.—*The Sanitary Record*, London, Vol. xxxiii: "The Engineer remarks that little or no advance was made during the past year in the matter of sewage treatment; there has been an accumulation of experience, and in the near future, definite developments may be looked for. The one predominant feature, however, is that bacterial methods are unquestionably gaining favor. It is a thing most rare to find two samples of even domestic sewage which will yield the very best results with absolutely identical treatment. A minute change, perhaps here, perhaps there, may make all the difference between success and failure; moreover, with a sewage that will vary from hour to hour, means should be readily at hand by which any change may be easily recognized and as easily provided for. "We cannot help feeling," says our contemporary, "that what Mr. Scott-Moncrieff has suggested offers a better chance of universal success than has been offered hitherto by any other investigator. For use in the determination of the very best treatment of any sewage, this gentleman has devised during the past year, an ingenious testing machine by which may be at once obtained the four following factors, which he claims are those which must and should be known in order to obtain success. The four factors are: (a) The depth of filter needed to produce the required standard of purity in the effluent; (b) The quantity of air necessary for the life processes of the organisms; (c) The proper rate of flow per unit of filter-bed surface in order to obtain the best results, and (d) The best period of rest between each discharge to prevent gelatinous growths in the filtering material. The quantity of air has an important relation to the amount of nitrates produced, and hence to the fertilizing effect of the effluent. To be of real value in this direction an effluent should contain at least from 7 to 8 parts of nitrates per 100,000. Probably the average obtained throughout the country does not reach 2 parts, yet by proper arrangements this might be brought up to a useful figure. On this basis Mr. Scott-Moncrieff calculates that each 1,000 gallons of effluent would be worth at least from 5d. to 6d. when used as a fertilizer."

DELAYED AND NON-UNION OF FRACTURES.*

BY A. HAYDEN, M. D.,
SHULLSBURG, WIS.

The normal length of time required for bony union to occur varies with several conditions, the most important being:

First—Age. The bones of the young generally unite much more rapidly than those of the aged. This difference is of course most noticeable in very young infants, and in the very old in whom many fractures never are attended by bony union.

Second—Displacement. The time required for the osteogenetic processes to bridge over comparatively wide gaps between the bony fragments is obviously greater than the period which is necessary for the repair of a minute separation of osseous continuity, other conditions of course being equal. This rule holds regardless of age.

Third—Bone itself and the location of the fracture in the bone. Union takes place much more slowly when the fracture is confined entirely to the hard shaft of the bone, the truly bony tissue, than when the soft medullary tissue is also involved. The reproductive powers of the latter are greater than the former.

Fourth—General conditions of the patient. In all cachexias, many nervous affections, blood diseases, and infections, union is delayed. The conditions may go on even to the state of non-union.

When the bony continuity has failed to become re-established after the usual or normal length of time has elapsed, the condition is known as delayed union. This condition has also been described by some authors as a chronic fracture. If this condition of delayed union persists, the time being not a question of days or weeks but of months and years, it is then called non-union or pseudo-arthrosis. Pseudo-arthrosis and non-union are frequently, or to be more accurate, occasionally used synonymously by some authors. A sharp distinction is made between them by the more recent and better literature, and should be.

Delayed union signifies a slow reparative process but a condition, nevertheless, in which some attempt at repair is being made. It implies a paucity of osteogenetic power and reaction, a slow degree of, or a retardation in the proliferative and regulative capacity of the bone-forming cells (osteoblasts) to form new, healthy bone tissue.

*Read before the LaFayette County Medical Society, at Shullsburg, July 12th, 1904.

Clinical conditions may vitiate the process, as is presumably the case when an abundance of callus is found and still the bony continuity is not properly made.

Delayed union is of comparatively frequent occurrence. It will almost always yield to constant persevering recourse to mechanical, constitutional, or may be to surgical treatment. Non-union presents a very different appearance from the above. It occurs principally in three forms.

First, cases in which no attempt of any sort is made at repair.

Second, cases in which there is permanent fibrous or ligamentous union between the parts.

Third, cases in which there is interposed between the parts a new joint formed by the prolonged interaction between the fragments, together with a certain amount of reaction from the surrounding tissues.

Cases in which no attempt whatsoever at repair is made are, of course, exceedingly rare. Probably those in which there is absolutely no reparative reaction, do not occur.

Occasionally so little attempt at repair is manifest that we cannot recognize it and to this condition the above subclassification refers. Here some tropho-neurotic, general cachectic or some malignant process at the seat of the fracture retards and so completely prevents the osteogenetic process, that no counteraction is apparent. Fibrous or ligamentous union, to which the term pseudo-arthrosis may be applied, implies an absence of bone-forming tissue between the parts, or the presence of such tissue which lacks power to undergo transformation into solid bone. Pseudo-arthrosis, the condition in which a new and pathological joint is formed between the fragments, is most often seen where powerful muscles are attached to the fragments. The humerus in its middle or lower third, is the bone most frequently affected; following in order of frequency come the femur, the bones of the leg, and bones of the forearm. Owing to the consequent difficulty in securing fixation and immobilization of the fragments, fibrous union usually follows fractures of the patella, olecranon and coracoid process. This result is in fact expected in these localities, and it is not of such serious consequence as if the same condition were to follow the fracture of the shaft of a long bone, for fairly good functional results are obtained notwithstanding the incomplete restoration of the continuity of the bone. In some few cases of fracture, a callus has been formed and subsequently absorbed, the callus having become spongy; in rare cases this absorption has extended throughout the length of the fragments, the shaft of the bone being converted into

a fibrous cord. Occasionally such conditions occur associated with systemic diseases, notably scurvy, erysipelas and prolonged attacks of typhoid fever. Some believe that metallic suturing predisposes to absorption of the callus.

Pathology of Pseudo-arthrosis. The medullary cavities of the fragments become obliterated. In some cases the ends of the bone, especially when separated from each other, become conic in shape by absorption, or the ends may become broadened and still remain ununited by the forming callus. The length of the ligaments depends upon the distance between the fragments and the degree of mobility. Callus formations may be entirely absent or extremely inadequate. In some cases the fibrous tissue is the result of the resorption of the callus. The surrounding soft parts may also lend their share to the fibrous attachments of the fragments. The fragments may overlap and be attached literally by fibrous tissue. The fibrous ligaments may include nodules of bone. In pseudo-arthrosis proper the ends become ground off and smooth and hard or eburnated as time goes on. Sclerotic changes form an enclosing membrane around the false joint cavity. In some rare cases there is a coating of hyaline cartilage over the bone ends. A synovia like membrane comes to line the new cavity and secretes characteristic synovial fluid. These structures form a complete anatomical joint, normal in every way except in its etiology and position.

Etiology. The causes are both local and general. The same influences act for delayed and non-union, the difference being mainly a matter of time. In the former, constitutional conditions have the most influence. Syphilis, rachitis, osteomalacia, scurvy, acute infectious diseases, alcoholism, prolonged lactation, debility consequent upon long continued poor non-nutritious diet, and malignant or other wasting diseases. Delayed union has occasionally been attributed to the puerperal state. This, if it really be a cause at all, is only a temporary one and will be removed as soon as the child is born. Since time immemorial senility has been considered a cause of non- and delayed union, but to-day the trend of opinion seems to point the other way and this condition is no longer believed by the best men to be an etiologic factor. In fact, Senn says "Senile osteoporosis may be considered a favorable condition for callus formation."

A certain number of cases occur in young men without apparent ascertainable cause whatever. These usually clear up with careful, patient, persistent treatment.

Local Causes. Faulty treatment is agreed to be the most frequent cause. This may consist of incomplete reduction or imperfect immobilization of the fragments in their positions or of a combination

of these factors. Complete encasement of the limb in a plaster cast has been stated to favor delayed union, because sunlight and exposure to the air was in this way denied the affected member. Want of apposition may be due to separation of the parts by powerful muscles, destruction of bone due to crushing, or overlapping of the fragments by muscular action. Oblique fractures predispose to imperfect immobilization of fragments; improper apposition is the one important cause of the frequent fibrous union that results in fractures of the neck of the femur. Senn says this is the only cause in this particular locality. The next most important local cause is the presence between the fragments of a foreign body, which may be a muscle, tendon, nerve, blood clot or some foreign material, as in compound fracture, and is particularly apt to occur in the V-shaped fractures.

Want of a certain amount of pressure of one fragment on the other may predispose to delayed union. Oblique fractures and fractures of one or two parallel bones in which there is loss of some of the bone substance, are examples of this. Defective blood supply to the part, from whatever cause, may be an etiologic factor. Among the causes of this poverty of blood, may be the necessary ligation of, or injury with occlusion of a principal artery. It may also come from improperly applied splints and dressings or from constant and continuous swelling of the parts, each of these factors tending to impoverish the arterial flow to the diseased bone. In intracapsular fractures this condition may arise from a normally poor vascular distribution, as in intracapsular fractures of the femur.

Syphilitic or malignant diseases of the bone obviously favor a tardy union. They may even entirely inhibit it. Inflammation of the limb at the seat of fracture, prolonged application of heat or cold, wet dressings, loss of periosteum by inflammation or under pressure from pads and attempts to use the broken limb too early, may be mentioned among the other local causes of this condition.

Dennis, among others, states that when the fracture is located in that part of the bone distal to the direction in which the nutrient artery flows, it is most likely to give rise to non-union, and in support of this view cites statistics to show that this condition occurs most frequently in the upper part of the humerus, the lower part of the femur, and the upper part of the tibia respectively. Senn, however, believes that injury to the nutrient vessel has no effect on bony union and accounts for the frequency of non-union in the above mentioned localities by the difficulty in reducing and immobilizing these fractures on account of their shortness and strong muscular attachments.

Diagnosis. This is made by the presence of abnormal mobility after a period of time sufficient for bony union to have taken place. There is generally no crepitus accompanying this mobility and the motion is painless within certain limits. In some cases overlapping of the fragments may be detected. There is always a functional disturbance associated with the condition, the limb is nearly or quite useless, or even worse than useless. The X-ray is of great value in diagnosing false joints. The shape and location of the fracture ends, or the interposition of a foreign body may thus be determined.

Prognosis. This is good for recovery provided the proper treatment be extended over the necessary period of time, which may in some cases be considerable.

Treatment. As in all other surgical and medical procedures, treatment must be directed directly against the cause. This I have stated may be general or local, or both. In case of delayed union the constitutional treatment, associated with perfect reduction and immobilization, is of course of prime importance.

Plaster of paris dressings are to-day largely preferred, as a general rule, to all other immobilization measures. Much is to be hoped for by this treatment, especially if the splints are of such a nature as to allow the patient to leave the bed. Where a syphilitic history exists a vigorous anti-syphilitic treatment should be promptly inaugurated. Various preparations of iron and phosphorus should be given to improve the general condition. The patient should lead an out-of-door life as much as possible and should take a judicious amount of exercise regularly. Small doses of the mild chloride followed by a morning hydragogue cathartic may well be given at intervals of seven to ten days. The diet should be nutritious and abundant, even to a slight degree of over-feeding. The phosphates, especially calcium, are strongly osteogenetic in their influence.

Innumerable forms of local treatment have been advanced. Among those which have been extensively used, but which have now fallen into almost entire disuse, are the seton, injections of irritating fluids, acupuncture and cauterization of the ends of the fragments, blisters or caustic alkalies applied to the overlying skin, violent percussion over the fragments with a mallet, and various forms of electricity. Massage may be mentioned among the approved methods of procedure. It is extensively used in many of the best hospitals today. Its one element of danger is that it prevents the perfect immobilization of the fragments. The local blood supply can be increased by the application of mild constriction above and below the fracture. This is, however, not generally practiced. The fragments may be

bent nearly to right angles, their ends rubbed forcibly together, and the fractures reduced and immobilized. Some believe in obtaining this same result in fractures in the lower extremities by having the patient use the leg to some extent, as by standing on both feet, thus making the fractured bone support some of the weight of the body. The ends of the bones are in this way irritated and callus formation stimulated.

Brainard introduced the practice of drilling the bone ends. The drill is introduced either subcutaneously or through an incision, preferably the latter, and a number of perforations are made in various directions through the bone ends. The medullary canals are thus opened and the bone formation is thereby stimulated. This is, of course, followed by reduction and immobilization.

Fixation by spikes is another practice now widely used under special indications. At first metal spikes are used, but in more recent years absorbable, aseptic bone and ivory nails have been substituted. Two nails are generally used, especially if the line of fracture be oblique. Contra-indications to the use of ivory nails, are obesity, general debility, arterio-sclerosis and old age. This method may be combined with the Brainard operation with good results, and is especially indicated in oblique fractures. In small bones nailing is impracticable. Here the fragments should be bound together with heavy catgut, or heavy silver wire; the latter because of its durability is usually preferred. This operation has been in practice since the very earliest days of surgery, and is the one which is probably the most commonly used, and generally successful in fractures of bones of all sizes. If the fracture is more or less transverse, the suture to be used is practically a mattress suture, extending through the whole thickness of the bone. If the fracture is quite oblique, the suture is passed around the bone at right angles to the line of fracture, thus embracing the two fragments. A groove made into the substance of the bone aids very materially in maintaining the circular suture in the proper position. The nailed fragments have been fastened together by cylinders of bone, inserted into the ends of both pieces. This is not generally successful, as the solid cylinder is too large to permit of rapid absorption. Senn sought to obviate this difficulty by using perforated bone cylinders instead of the solid one. He also recommends the use of bone ferrules or splints. These were the size of the fractured bones and placed about the fragments. They are especially recommended for oblique fractures. These methods, however, have not been generally adopted.

If there be loss of bone substance the cavity may be filled with decalcified aseptic bone chips, to serve as bridge work for the callus.

If delayed union is due to interposition between the fragments of soft tissue or foreign substances, this obstacle should be removed immediately by operation: the ends should then be drilled, coapted, and suitably immobilized.

All operations on the bone should be done with the strictest aseptic precautions. After the wound has been sutured the limb should be encased in a fenestrated plaster of paris splint, the fenestra exposing the site of the incision.

In brief then the best methods of treatment to be adopted in the case of delayed union are:

First: The parts should be perfectly fixed and immobilized, preferably in plaster of paris for a longer time than is considered sufficient for normal bony union to have taken place. Associated with the local treatment the general health should be improved by tonics, nutritious diet and a liberal amount of out-door exercise.

Second: If this treatment fails the ends of the bone should be rubbed forcibly together, subcutaneously, the fragments placed in proper position and immobilized in a suitable manner. The constitutional treatment indicated above should be used, and skillful, judicious massage should be employed.

Third: If failure again results after a reasonable length of time, do the Brainard drilling operation preferably through an incision. The use of aseptic ivory nails may be considered.

Fourth: If this treatment does not procure bony union, operate and vivify the fragment ends, securing them together with ivory nails, silver wire or strong cat-gut. Ivory nails are especially indicated if the fracture is oblique. Make frequent X-ray examinations to see that the fragments are maintained in a proper position. All of the above last resort methods, must always be accompanied by general constitutional treatment as indicated in each case.

The treatment of pseudo-arthrosis is usually operative. Under an anesthetic the adhesions may be torn by bending the parts in various directions followed by rubbing the fragment ends together, reducing, and suitably immobilizing.

After the indirect methods have failed, the false joint is exposed by an incision. The joint is then resected, and the ends of the fragments freshened, apposed and fixed by cat-gut or ivory nails, as the special indications may demand. All the fragments of the periosteum should be saved and sutured into place. Any of the fibrous tissue which will aid in supporting the bone is saved and placed about the bone, and made to act as a natural splint. The limb is then immobilized and allowed to remain until the union is made. If the false

joint is in one of two parallel bones, it may be necessary to resect a corresponding portion of osseous tissue from the sound bone.

When all other lines of treatment have failed, the limb should, as a last resort, be amputated above the false joint—a most radical proceeding. Cases in which this is indicated are, of course, extremely rare. It should only be practiced after all other possible measures have received fair trial and have proven themselves worthless to remove the pathological condition. In very rare instances the false joint may be of some use to the patient. As a general thing, however, it is either absolutely useless or even worse than useless, being a burden and hindrance to the patient in exercising the normal function of the part involved. In these cases amputation should then be advised by the surgeon and will be welcomed by the suffering patient. In these cases the unfortunate sufferers are willing to submit to the most heroic measures in order that they may be rid of the useless member; they would frequently exchange the unsightly deformity for a good, sound, useful stump, which, with the aid of an artificial limb, or even without such aid, will be of vastly greater service to the patient than the useless and cumbersome structures below the false joint could ever possibly be.

Cancer of the Stomach: Report of a Case with Gastrectomy.—H. C. Crowell, (*Kansas City Med. Record*, Sept., 1904.) Crowell's experience in the case reported impresses the possibility of error in diagnosis until the latter is verified or corrected by actual inspection of palpation following abdominal section. It also emphasis the necessity of being prepared for extensive resections whenever the abdominal cavity is opened for the removal of a tumor possibly connected with the stomach or testines. The detailed report of the case is full of interest and should be read in full. The author sums up the most advanced thought on cancer of the stomach in a series of clear statements, which are in accord with the teaching of those who have done most to advance this branch of surgery, and may be briefly summarized as follows:

1. Cancer of the stomach is a surgical disease and not amenable to other methods of treatment. 2. It is amenable to treatment by early surgical intervention. 3. The conditions for safe and effective work, so far as they pertain to the anatomy of the structures concerned, are comparatively favorable, more so than in the case of the uterus. 4. Early diagnosis, meaning in many cases exploratory incision, is the first essential towards successful work along these lines. (H. Reineking.)

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EDITORIAL COMMENT.

A LESSON IN TYPHOID INFECTION.

The lessons afforded by the various outbreaks of typhoid fever are numerous enough and should make a lasting impression on the minds of all who are familiar with them.

The recent experience with the disease at Port Washington, this state, seems to call for more than a passing notice. The city contains a population of some 4000; there had been no cases of the disease in the city for more than a year prior to the outbreak; the water supply is furnished by dug wells, most of which are quite deep, and when some thirty cases of typhoid came to the notice of the health officer at one and the same time, located in all parts of the city, it could not reasonably be concluded that so many wells could suddenly be contaminated. The milk supply was the next matter to be con-

sidered, and it was soon learned that nearly all the families in which the disease occurred were supplied with milk from one dealer; on further investigation it was found that this dealer had cases of typhoid in his family; moreover, it was learned that he obtained a portion of his milk from another farm-house in his neighborhood in which there were also cases of the disease. This established two foci of infection. The origin of the cases in the farm-houses is unknown, but it is known that members of those families were absent from home during a period just prior to the outbreak, and such being the case it is easy to understand how the infection was brought into the families.

It is well known that milk furnishes an excellent culture medium for the development of the typhoid germ, and samples of milk taken from the cans of the dealer were sent to and examined by the bacteriologist at the laboratory of the Milwaukee Health Department and satisfactory evidence of the presence of typhoid bacilli was found. The first cases were reported on September 23, 1904, and from that date to November 3, 1904, 98 cases with 9 deaths have occurred; there are still some 25 cases under treatment, but it is hoped that the disease is now under control.

"Eternal vigilance" is the price of the public health as well as the price of liberty, and a careful and often repeated inspection of the milk supplies of all cities is the only way such serious results can be avoided. More money must be appropriated by municipalities for the protection of the public health; the expense of a proper inspection and control of a milk supply of a city is a mere bagatelle compared with the expense of the sickness of one hundred persons suffering from typhoid fever, to say nothing of the loss of valuable lives, and the great suffering and anguish caused by such an outbreak as is here related.

The medical profession has discovered and pointed out a way by which this disease can be prevented, and it is now "up to" our municipalities to furnish the means whereby this important work can be accomplished.

ETHER DAY.

The spirit that actuates the Massachusetts General Hospital authorities in commemorating Ether Day—that epoch-making period in the medical history of the world—and their conscious pride in keeping alive in the memory of all, the place where and time when the practicability of the discovery was proven—are indeed worthy motives in a worthy cause.

We trust the annual celebration of this event will continue, lest we forget, in our contempt for things familiar, that the blessing of painless surgery is a modern achievement.

STATE CARE OF THE TUBERCULOUS.

The cry of the present day Boards of Health—municipal and state—is a call to arms to combat the Great White Plague. The local, county, and state societies are actively interested; there are national gatherings and international congresses; we are living in an era of intense and universal agitation: the people are beginning to appreciate that we have a deadly yet combatable plague at our very doors—deadlier by far and (to us) more dangerous by far than the bubonic plague will ever be. Why cite statistics? We know they are appalling and impossible of exaggeration.

The commendable activity of the Secretary of the Illinois State Board of Health, in endeavoring to create a sentiment in favor of the establishment of a state sanitarium, is well demonstrated in a circular issued by that body on the "Cause and Prevention of Consumption." This is a third revised edition of this circular, the first edition of which was published in July of this year, and the second in August. So great has been the demand for this brochûre, not only in Illinois but from all parts of the States, that this third edition was necessitated. And this recognition accorded the Illinois Board is indeed well merited. The circular is so worded as to be intelligible to the layman. It deals with the germ nature of the contagion, and the method of its propagation through the sputum. "No spit, no consumption," is the trite wording of a frequently repeated admonition. Then follow directions on how to avoid consumption, how to act if you have the disease, the hygiene of the sick room, and the like.

The most important matter treated, however, pertains to the desirability of establishing a state hospital for consumptives, and in proving the practicability of obtaining results on a par with those of the institutions at Rutland and Sharon (Mass.), Saranac Lake (N. Y.) and Chestnut Hill (Philadelphia). A comparison of the climatic conditions and elevation of a town in Northern Illinois with the places mentioned, proves Illinois to be exceedingly favorably located, and leaves no room for doubt that that state can successfully care for her consumptives at home.

The following paragraph indicates the happy conclusions arrived at from a comparative study of climatic conditions elsewhere:

"It has already been demonstrated that, with out-of-door life and proper methods of living, recoveries from consumption have taken

place as frequently as Rutland as in institutions where the ideal climatic conditions are said to exist, and the fact that, in Illinois there may be found all of the climatic conditions, sunshine, freedom from excessive rains and high winds, temperature and satisfactory soil, possessed by Rutland or other of the eastern hospital sites, and a sufficient elevation above sea level, indicates plainly what Illinois can accomplish in the treatment of her unfortunates at home."

Anyone interested in this struggle to reduce the tuberculosis mortality and morbidity, will profit greatly by a perusal of this instructive circular. And State Boards of Health that are endeavoring to convince executive officers of the duty that devolves upon a state—especially one that is favorably situated—of taking care of her own tuberculous, will await with interest the action of Illinois.

Wisconsin is making satisfactory progress toward this end, and we have reason to feel hopeful that this state will be among the pioneers in the care of her own afflicted ones. The essentials are given—climate, altitude, soil; time and patience will do the rest.

A FRAUD EXPOSED.

In Edward Bok, Editor of the *Ladies' Home Journal,* the medical profession has indeed a worthy champion.

In our efforts to curtail the iniquitous practices of quacks, we are so often confronted with the time worn, monotonous argument "medical trust" that it is in truth refreshing to find the initiative in this warfare taken not by a medical man, but by one whose word of caution and advice reaches far more individuals, far more firesides, than a host of physicians could command. Edward Bok did mankind a service when he banished from the columns of his paper that class of advertisements which—though lucrative—were unfit for the perusal of decent people; he conferred a further boon when he exposed the large alcohol contents of the much advertised patent medicines; he has now carried his crusade still farther and seeks to protect the mothers and daughters of a million homes from paying a generous bounty to a class of thieving violators of every innocent sentiment possessed by woman.

In an article entitled "How the Private Confidences of Women are Laughed At," there is told in all its cold, horrible details, the methods pursued by and the inner workings of an advertising concern that caters to women's ills, and—by alluring promises of secrecy and guarantees of speedy cure—invites their confidence, only to barter this away to the highest bidder. The writer of the article had ocular demonstration of the fact that the "great Doctor" never sees the thousands of letters which he is supposed to give his "personal ad-

vice;" that medicines containing a large percentage of alcohol are sent to every inquirer irrespective of the nature of the symptoms complained of; that the answers to letters and the medicines are selected by number without any reference to possible indications for treatment; that the names and addresses and even the letters of the unfortunate dupes who are attracted by the "absolutely confidential" consideration, are sold to other concerns plying a similar trade; and that all this is done by clerks of both sexes who have no knowledge of medicine, and need none.

The article cannot be quoted in detail, but deserves to be read by every physician. Some good will come of it, to be sure, but the lesson must be oft repeated, if permanent good be desired.

If the promised postal restrictions are carried into effect, we may hope for a future relief from an evil that has become deeply rooted at the present day. The co-operation of the postal authorities is needed; nothing else will make unbelievers of those who put faith in all the undisguised filth published in our newspapers under the mask of philanthropy and a pretence of sympathy for misguided sufferers.

NEWS ITEMS.

Opthalmology—a new journal, to be issued quarterly, is under the general editorial management of Dr. H. V. Würdemann and a large and capable staff of sub-editors, most of whom were until recently connected with the Annals of Opthalmology. Disagreements between the editorial and business management led to this new departure on the part of the editorial staff. The new journal, the first number of which has been issued, is very attractive in appearance; its original articles and copious abstracts of the ophthalmic literature of all languages make it a valuable addition to the special journals now being published. We bespeak for Ophthalmology an unquestioned and immediate success.

The American Public Health Association, composed of delegates from the United States of America, the Dominion of Canada, the Republic of Mexico, and the Republic of Cuba, will hold its 32d annual meeting at Havana, Cuba, January 9-13, 1905. Among the important subjects to be discussed are yellow fever, tuberculosis, plague, teaching of hygiene, the sanitation of travel, the tenement house problem, methods to control the milk supply of large cities, and antitoxic and immunizing sera.

Dr. J. N. McCormick, of Kentucky, national organizer of the American Medical Association, will attend the meeting of the Milwaukee County Medical Society, Nov. 16, and will deliver an address. Dr. McCormick is making

a tour of Wisconsin to arouse still further interest in the general reorganization plan of the American Medical Association.

New Health Ordinance.— An ordinance has been introduced in the Milwaukee Common Council and recommended for passage which provides for the examination by the Health Department of all foods and medicines sold in the city.

Smallpox Appears Again.— Cases of smallpox are again frequently reported in Milwaukee. Twelve cases were recently reported in one day.

MEMORIAL ADDRESS.*

RALPH CHANDLER, M. D., OF MILWAUKEE.

By Gilbert E. Seaman, M. D.

We are gathered together to-night upon a sad and to this Society as yet an unusual occasion—to commemorate the life and death of one who was near and dear to most of us. This body has been singularly free from the frequent shock of death in its ranks. Fortunately we have been but rarely reminded that, "death will seize the doctor, too." When I was called upon to prepare a memorial sketch of the life and character of our late friend and associate, Dr. Ralph Chandler, I hesitated in my response because I fully realized my inability to properly discharge the duty, but it was a duty imposed by intimate friendship and long association and one that could not be refused. I trust, therefore, that the few words I have to say will be accepted by you as the inadequate, though sincere tribute of a friend to one whose friendship was of a sort that makes one stronger in the belief in the general goodness of mankind.

When one who like our departed brother in the full flush of manhood, is removed from the activities of life and goes to explore that unknown country of which our knowledge can only be measured by our varying hopes and oftimes halting faith, humanity and friendship alike demand that we pause at our work, and by our summing up of the good that was in his life, pay a tribute to him, at the same time that we seek to apply that good to the betterment of our lives and interests.

*Address delivered before the Milwaukee Medical Society, Oct. 11, 1904.

*Read before the 58th Annual Meeting of the State Medical Society of Wisconsin, Milwaukee, June 23, 1904.

Ralph Chandler was born in Milwaukee 43 years ago, the son of Walter S. and Sarah O. Chandler. He spent his early childhood and boyhood here and in the neighboring city of Waukesha, receiving his early education in the public schools, Milwaukee Academy and Carroll College. At 21 years of age he entered upon the study of medicine with Dr. Solon Marks of this city, and in 1883 matriculated at Rush Medical College, Chicago, graduating in 1886, and shortly thereafter entered Cook County Hospital as an interne, where he served the full term of eighteen months, during which time he also served as prosector for that distinguished anatomist, Charles H. Parkes, and was a faithful pupil of that master of surgery, Christian Fenger. It was here that Dr. Chandler gained much of his broad knowledge of surgery and surgical pathology. And is it surprising that from such association should spring a strong leaning toward the surgical art? He had a decided bent toward mechanical matters, was exceedingly ingenious, and naturally he was particularly interested in the anatomy and surgery of fractures, a branch of the art in which he was unusually skillful, resourceful and successful. It is not too much to say that Dr. Chandler's judgment and skill in the surgery of fractures was equal to that of any man in this community at least. His knowledge of, and his memory for anatomical details was remarkable. He was a studious, conscientious practitioner, and one of whom it can be truly said, he had in his makeup the elements of a splendid physician and surgeon.

In 1888 Dr. Chandler entered upon his professional work in this city, and from that day until his death, August 12, 1904, he practiced medicine honorably and conscientiously, and as befits a man with the heritage of good parentage, gentlemanly instincts and adequate scientific training. No professional brother has ever suffered intentional wrong at the hands of Ralph Chandler. He was generous in his judgment of men, fair and honorable in all his dealings with his professional associates, and more than one young man has occasion to be grateful to Ralph Chandler for substantial encouragement in the earlier days of his professional career. Dr. Chandler took an early and abiding interest in the Emergency and Children's Hospitals of this city, and to his work as much perhaps as to that of any man, is due the success of these institutions. As is well known to his friends, Dr. Chandler took a great interest in military affairs and served with credit as an assistant surgeon in the Wisconsin National Guard for many years. He also served for some time as an acting assistant surgeon in the U. S. Marine Hospital Service at this port. By inheritance from a loyal and distinguished ancestry he was

an honored member of the Wisconsin Chapter of the Loyal Legion. For many years he has been a member of the Milwaukee Medical Society, the State Medical Society of Wisconsin, the Milwaukee County Medical Society, the Association of Military Surgeons, and the American Medical Association.

He was married in this city, eleven years ago, to Miss Louise Eldred, who survives him. Until the hand of disease was laid more heavily upon our friend than many of his associates knew, he was the soul of good nature, wit, geniality and goodfellowship. With human interests as broad as the world itself, loyal, kind and steadfast in all the relations of life, he had a circle of friends as large as that of any man in the city. His patients, the children, the newsboy on the street, the poor laborer, as well as those whose lines are cast in favored places, alike were moved to grief at the untimely death of Ralph Chandler. A modest man, he was not one who looked with favor upon meaningless praise or who claimed credit beyond his due, and I am sure that upon this occasion were he conscious of the events, he would desire that his friends and associates render to his life and character only that meed of commendation which is justly due.

We therefore pay this brief tribute in the full consciousness of its insufficiency, but with faith that it is properly and worthily bestowed. Those who knew him best, loved him best, valued his friendship most, and will I am sure cherish the memories of that friendship as one of their most valued possessions.

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ORGANIZED 1841.

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Next Annual Session, La Crosse, June, 1905.

The Wisconsin Medical Journal, Official Organ.

SOCIETY PROCEEDINGS.

DODGE COUNTY MEDICAL SOCIETY.

A regular meeting of the Dodge County Medical Society was held at Minnesota Junction, Nov. 7, 1904.

"*Inflammation, Its Etiology and Therapy,*" was presented by Drs. C. G. Schwalbach of Juneau and E. P. Webb of Beaver Dam.

Dr. H. A. Sifton of Milwaukee, by invitation, gave a very interesting talk on "*Appendicitis and Its Complications.*"

H. B. SEARS, M. D., *Secretary.*

LA CROSSE COUNTY MEDICAL SOCIETY.

The regular monthly meeting of the La Crosse County Medical Society was held Oct. 6, with a good number of members present.

Dr. A. Gunderson read a paper on *Prostatectomy,* reviewing the history of the diseases of the prostate. He reported eleven cases which he had operated upon. In old and advanced cases he favors the perineal route as that which promised the best results. The paper was discussed by a number of the members.

C. H. MARQUARDT, M. D., *Secretary.*

MILWAUKEE COUNTY MEDICAL SOCIETY.

Regular Meeting. October 11, 1904.

By invitation Dr. Stolte exhibited a case of *tuberculous laryngitis* in which a large number of excrescences had been removed from the vocal cords. The case was discussed by Drs. Hitz and Elmergreen.

Dr. Shimonek made a preliminary report of *three cases of gastric ulcer.* The first case was chiefly interesting on account of the impossibility of closing the tear because of the infiltration. The stomach was so bound by adhesions that the area could not be excised. The peritoneum was stitched to the edge of the wound and the stomach left with drainage. The patient died of shock. In the second case the patient had cholelithiasis for which she was being treated, when suddenly symptoms of rupture of an abdominal viscus became manifest. It was supposed that the gall-bladder had ruptured, and she was operated upon with this diagnosis. The gall-bladder was found intact, however, but a perforated ulcer was found in the stomach. This was closed and an operation for gall-stones done at the same time, with perfect recovery. Dr. Shimonek suggested that the gastric ulcer might have been due to a septic embolus from the gall-bladder. The third case was in a woman of sixty, in whom the pylorus was greatly infiltrated. The mass had more the appearance of an inflammatory than carcinomatous infiltration. A posterior gastro-jejunostomy was done with perfect recovery.

Dr. Hitz gave a preliminary report of a case of *double mastoiditis,* complicated by a suboccipital abscess, communicating with both ears.

Dr. Seaman presented a Memorial Address in honor of Dr. Chandler.* Dr. Marks, who is confined to his home, presented through Dr. Smith a short paper upon the early life of Dr. Chandler, when he was intimately associated with him as preceptor.

Regular Meeting, October 23, 1904.

Dr. Studley exhibited a patient in whom there was a *transposition of viscera,* the third case that he had seen. The condition was found during an examination of the chest for bronchitis. The apex beat is about two inches below the right nipple. On the left side a supernumerary nipple was found below the normal one. Dr. Washburn in discussion stated that he had seen two cases of transposition of the viscera in eleven thousand insurance examinations. He believes the condition occurs more frequently than is commonly stated. Dr. Stoddard reported having seen two cases in European clinics.. one in a cretin. In one case, that of a man, the right testicle was found lower than the left. Dr. Reincking saw a case in Europe in which post-mortem findings showed a complete transposition of abdominal and thoracic viscera, and a transposition of the vessels of the neck.

Dr. Studley, replying to a question of Dr. Washburn as to whether the patient's longevity was influenced by this transposition, said that he did not believe that it was, particularly; but that the literature seemed to show a greater tendency to aneurism. Dr. D. W. Harrington, in discussing the theories of the causation of this condition, stated that it was his belief that when one viscus is found transposed, all will be.

Dr. U. O. B. Wingate presented a paper upon *Syphilis as an Etiological Factor in Apoplexy.* He cited several of the older writers to show that until a comparatively recent date syphilis as an etiological factor was not alone ignored, but its possibility denied. Care should be used in arriving at the real

*The address appears elsewhere in this issue.

cause of the condition, because the treatment should be regulated accordingly. He reported several cases to bear out the contentions of his paper.

Dr. Studley reported three cases of organic dementia following apoplexy of syphilitic origin. Dr. D. W. Harrington reported a case of apoplexy in a child of three years, probably of syphilitic origin. The paper was discussed further by Drs. Hayes, Schiller and Studley.

HOYT E. DEARHOLT, *Secretary.*

FOX RIVER VALLEY MEDICAL SOCIETY.

The regular quarterly meeting of the Fox River Valley Medical Society was held at Oshkosh on Tuesday, Oct. 18, 1904. A clinic was held at St. Mary's Hospital in the morning, by Dr. C. W. Oviatt. The afternoon session was held at the City Hall. In the absence of the President, Dr. J. V. Canavan of Appleton was elected President *pro tem.*

The following named physicians were elected to membership: Dr. C. M. Echols of Appleton, Dr. F. S. Wiley of Fond du Lac, Dr. S. C. Todd of Neenah.

A paper was read by Dr. W. B. Hill of Milwaukee, on *The Use and Abuse of Antipyretics,* which was discussed by Drs. Corbett, Minahan and Barnett.

A paper was read by Dr. F. Shimonek of Milwaukee on *Carcinoma of the Breast,* which was discussed by Drs. Gudden, Thienhaus and Minahan.

J. S. REEVE, *Secretary.*

MILWAUKEE MEDICAL SOCIETY.

Meeting of September 9, 1904.

Thirty members were present. President G. E. Seaman in the chair.

Dr. H. V. Würdemann discussed the indiscriminate and injudicious use of *atropine in eye conditions,* reporting several cases of glaucoma rendered worse by its use. Dr. H. Reincking reported a case in which delirium had been caused by instillation of a considerable quantity of atropine solution, illustrating the indiscriminate use of atropine by the profession. Drs. T. L. Harrington and G. E. Seaman reported their experiences along the same line.

Dr. Reincking reported a case of *traumatic pneumothorax,* in a man who was thrown from a buggy against a curbing, striking upon the left side of the chest. There was no lesion of the chest wall and no subcutaneous emphysema. The chest was tapped on the third day, air rushing through the trochar with force, after which there was complete relief of dyspnea and of rapid heart action.

Dr. W. Becker reported the case of a child who was sent to him with a diagnosis of tuberculous peritonitis. No fluid was found on tapping. An abdominal incision revealed an immense tumor mass, filling the entire abdomen and so adherent to the viscera that removal was impossible. The origin of the tumor could not be determined at that time. Autopsy showed the growth to be *adeno-sarcoma of the kidney.*

Dr. Nahin reported a *case of appendicitis* with abscess formation which illustrated the fact that dearth of symptoms is no criterion of the pathological condition.

A. W. GRAY, *Secretary.*

THE WISCONSIN
MEDICAL JOURNAL

DECEMBER, 1904

ORIGINAL ARTICLES.

HYDRONEPHROSIS.*

BY G. D. LADD, M. D.,
MILWAUKEE.

By the term hydronephrosis we designate a distention of the pelvis of the kidney with urine, due to obstruction of some portion of the urinary tract. The obstruction may be partial or complete. The duration may be either quite temporary or prolonged. The condition may and does recur in the same individual.

The obstruction may be located at any portion of the ureter, and, in the case of an infant reported by Dr. Grider of this city, and seen by me, the obstruction consisted of an extreme degree of phimosis. While usually limited to one kidney, due to obstruction of one ureter, still, when the obstruction is due to stricture of the urethra, to enlarged prostate, or, as in the case cited, it is due to phimosis, the hydronephrosis will be bilateral.

The distended portion of the urinary tract consists of the ureter above the obstruction, the pelvis of the kidney, the calices, and may reach to the uriniferous tubes. The extent and permanence of the dilatation depend upon the completeness and duration of the obstruction and also the frequency of its recurrence.

Simple distention of the urinary tract within the kidney, independent of the circulatory disturbance which is usually attendant upon it, will result in change of structure and consequent damage to the kidney.

*Read before the 58th Annual Meeting of the State Medical Society of Wisconsin, Milwaukee, June 23, 1904.

An accumulation of urine within the pelvis of the kidney is quite prone to infection, and a hydronephrosis may become a pyonephrosis in this way. The grave changes which may finally result, when the kidney becomes a distended sac (cystonephrosis), or when infection converts it into an abscess cavity with little or no secreting tissue left, are well known.

The only reference to the anatomy of the parts that is necessary for our purpose, is the statement that the normal kidney, which cannot be classed as a movable kidney, does present a certain amount of motion, changing its position slightly with the motions of the diaphragm and other adjacent muscles. The ureters are tortuous in their course to the bladder to allow of motion of the body without stretching them. The ureter varies in the angle at which it leaves the kidney and this angle must change somewhat when a kidney becomes movable. Valvular folds frequently exist in the upper part of the ureter.

The causes of hydronephrosis may be divided into those which originate within the urinary canal and those which originate from without.

The causes of hydronephrosis existing within the ureter are valvular folds, stenosis, either organic or due to swollen mucous membrane, the result of infection, coagula or shreds and calculi. Those originating from without the ureter are due to bending or twisting of the ureter, or to occlusion from pressure caused by tumors, impaction within the bowels, and the like.

Valvular folds frequently exist in the upper portion of the ureter near to the pelvis of the kidney. P. Bazy, of Paris, found in 68 newly born infants only 15 in which the ureters were absolutely normal; valvular folds, narrowings, and kinking or torsion to some extent were present in 31 cases. The pelvis of the kidney also showed great variation in size and shape, and the angle of insertion of the ureter might be vertical or horizontal. He concludes that the combination of a large renal pelvis with horizontal insertion of the ureter, the ureter being shaped like an elbow, with stricture, folds or torsion of the upper end of the ureter, is the most frequent cause of hydronephrosis. He believes that hydronephrosis may be a consequence of movable kidney, but that generally ptosis and movable kidney are a result of hydronephrosis. This is a new thought and seems reasonable, but more so as we learn how frequently partial, or temporary and recurrent hydronephrosis exists.

Stenosis or stricture of the ureter may be congenital or may originate after birth. There is a possibility that the ureter, like the

urethra, is subject to spasmodic stricture due to reflex irritation. Infection of the mucous lining of the ureter and pelvis of the kidney is a prolific source of temporary or even prolonged obstruction to the ureter. Swelling of the mucous membrane, or the shreds and coagula of pus or blood cause obstruction, temporary and usually incomplete. Calculi were formerly assumed to be the cause of all cases of nephritic colic. As we learn of the other causes there arises the question as to the origin of calculi within the kidney or pelvis of the kidney. We know that obstruction causes the formation of calculi. The incrustation that takes place on a tube or catheter left in the bladder, as well as the enlargement that follows on what was originally a small calculus retained within the bladder, is well known. Calculi within the kidney frequently have for their starting point some particle, as a minute shred or coagula. It has been demonstrated, by catheterization of the ureter, that residual urine may be present in the pelvis of the kidney. The frequency with which slight hydronephrosis occurs would indicate that it is often the first deviation from the normal condition in these cases. We believe that retention of urine within the kidney favors the formation of calculi, and that while calculi become a cause of obstruction they may be a result of obstruction that was primarily brought about by causes already mentioned.

Flexion and torsion of the ureter take place when the kidney is movable to a sufficient degree. There may be a considerable or even extreme degree of motion to the kidney without hydronephrosis. There may be also a condition of acute hydronephrosis without appreciable displacement of the kidney or the appearance of any enlargement that can be detected in an examination. Where there is a large pelvis to the kidney, or the angle formed by the ureter is such as to favor occlusion by flexion or torsion, it is likely that very slight mobility of the kidney brings about the condition. Dr. Lea, in a paper read at Manchester, England (*British Medical Journal*) says, "Sudden strain or effort may then produce obstruction of the ureter and hydronephrosis. In these cases slight descent of the kidney not recognizable clinically may lead to ureteral obstruction. The symptoms might be very severe."

Where there is mobility of the kidney to a considerable degree the ureter is part of a pedicle composed also of arteries, veins and nerves. Torsion of this pedicle results in venous obstruction also, and there follows a venous engorgement with swelling of the kidney that may be as damaging to the structure of the kidney as is hydronephrosis.

The irritation to the nervous system which accompanies hydronephrosis must result in a considerable disturbance to the circulation

within the blood vessels of the kidney where there is no direct vascular obstruction. There arises here the question as to which condition is present, whether it is the hydronephrosis or congestion that is the most disturbing feature. That damage to the kidney tissue must result where either of these conditions continue, or recur frequently, seems certain. Dr. Fenger said, "The most formidable enemies to kidney tissue are retention and infection, and it is difficult to state which of the two is the more formidable. Retention, if incomplete, that is, remittent, may, I believe, be tolerated for a long time; if complete it is rapidly destructive."

The symptoms of acute hydronephrosis are those of renal colic, *viz.*: severe pain in the abdomen or lumbar region with constitutional disturbance. Where a tumor is present that can be felt by bimanual palpation—pressing against the fingers held well back under the twelfth rib, or, in case of movable kidney, carrying the tumor upward and backward so as to impinge against the fingers thus held, pressure being made with the other hand—it is easy to determine that the tumor is the kidney. Acute hydronephrosis may continue for a few hours and suddenly subside, the tumor, where one exists, quickly disappearing. In one such case the patient passed sixty-eight ounces of urine within an hour after the pain and enlargement of the kidney disappeared. It is not likely that this large amount of urine was all retained during the time of obstruction, but that secretion took place very rapidly when the ureter was again pervious.

Constitutional disturbance, while abrupt and marked in the acute and extreme condition of hydronephrosis, where there is complete obstruction, is frequently less marked, but more prolonged where there is partial or incomplete obstruction as in movable kidney. There are here two factors operating to produce general symptoms, *viz.*: direct irritation to branches of the sympathetic nervous system, and autointoxication the result of deficient elimination. Writers upon this subject note that these patients are often neurotic. The condition of neurosis is probably more frequently a result of renal insufficiency than a cause of it, however, they usually co-exist. Pressure of a displaced kidney upon some portion of the intestine, frequently the large intestine, is a cause of local discomfort, reflex symptoms and sometimes of mucous colitis.

Renal insufficiency, or inadequacy, occurs at times in patients with apparently normal kidneys. It is a frequent and fluctuating condition where there is movable kidney. The results may amount to a considerable degree of uremia. Where there is frequent and direct irritation to branches of the sympathetic nerve, together with a lack of climina-

tion, there follows the functional disturbance which results in prostration and weakness, which, if not sufficient to cause complete invalidism, so incapacitates the individual that he simply exists to suffer. Indigestion, constipation, auto-intoxication, migraine and various local congestions may be traced to this cause.

Hydronephrosis, passive congestion of the kidney or movable kidney, to an extent that produces a palpable tumor, may need to be differentiated from gall-stones or infected gall-bladder, from appendicitis and from neoplasms within the abdomen. A movable kidney may be so displaced as to present an enlargement under the liver, even extending as far over as the median line, it may drop downward behind the descending colon, or downward and inward, occupying almost any position within the abdomen, even as low as the pelvis. The differentiation consists in the examiner's ability to move the kidney to its normal position under the twelfth rib at the back, or palpate a portion of the kidney at that point. While complete and continuing hydronephrosis is a comparatively rare affection, the partial and recurring form is much more common, and the recent advance in surgery of the kidney is in the diagnosis and treatment of these cases. Dietel's crisis, marked or otherwise, is of frequent occurrence in many of the patients with movable kidney, and should receive attention both for the safety of the kidney, and for the comfort of the patient as well. Lowered constitutional resistance is a constant invitation to the medical accidents, as acute diseases.

The treatment should be chiefly by surgical operation, and it should be advised before there is any great damage to the kidney. Palliative treatment does not effect a cure. Where there are none of the above symptoms present in patients with movable kidney, we may consider other advice, or even the advisability of informing them of the diagnosis. The pressure of a pad, in movable kidney, sufficient to prevent the kidney from slipping down behind it, would be intolerable to the patient and damaging also. Still many patients obtain a sufficient degree of relief from an elastic abdominal supporter with a pad under the ribs, the pressure being slight. This course should be tried where the kidney is not greatly enlarged or tender.

Between the two extremes of advice given to patients with movable kidney, as, operation in all cases, and, never submit to an operation, lies the truth. Many of these patients do not complain, yet they carry a handicap through life and we do not know what degree of health they might enjoy without it. The risk in the operation of nephrorrhaphy is the minimum in surgical procedures, and the results as to improvement in health are often brilliant. Larrabee and Aaron

have recently emphasized the frequency with which enteroptosis and movable kidney coexist. What could be more likely to produce enteroptosis than the condition of renal insufficiency and depression which attends upon movable kidney? Properly fitting supporting bandages should be applied to these patients until they can develop their abdominal muscles sufficiently to support the abdominal viscera and they acquire that habit of so supporting themselves. They should frequently contract the abdominal muscles within the bandage and hold the abdomen up more and more until the supporter will become superfluous. This is the proper cure for enteroptosis and will also benefit the ones suffering from movable kidney.

Where there is frequent and prolonged renal insufficiency, frequent engorgement of the blood vessels from venous obstruction, as shown by enlargement, tenderness and pain, or recurrent hydronephrosis, the kidney should be examined through a lumbar incision and the operation of nephrorrhaphy done. It may or may not be advisable to open the pelvis of the kidney.

It seems probable that the improvement that follows many operations upon the kidney, as drainage of the pelvis of the kidney, the operation of splitting the capsule of the kidney, nephrolithotomy and the rarity with which there is a re-formation of calculi thereafter, is due, in part at least, to the adhesions that follow these procedures and consequent fixation of the kidney.

Discussion.

Dr. Richard Dewey, of Wauwatosa: I regret that Dr. Mackie is not present to open the discussion on this interesting and valuable paper. I am in some doubt as to whether my discussion of it can be of value. The surgeon gynecologist, the man interested in internal medicine, comes in contact with patients of this kind, while in neurological practice they are met with infrequently. My experience in cases of this kind has not been sufficient to warrant discussion to any extent. I have seen cases where hydronephrosis was present with movable kidney, and I have known of the relief and benefit (in many cases entire relief, and in some instances not complete relief), from operation for fixation of the kidney.

The thing that to me is most striking in these cases is the fact that there is a very marked association between neurotic conditions and movable kidney. The only point in which I would differ with Dr. Ladd would be as to the question whether the neurotic condition often found in such cases and so very marked in very many cases of movable kidney, is the result of the movable kidney. The two are associated—we agree as to that—but it is unquestionable that the movable kidney itself appears very largely in patients who are of neurotic constitution and heredity, and I have known cases in which even an operation failed to produce relief of the most urgent objective symptoms due to movable kidney. The effect upon the patient of an impres-

sion or an idea that there is something out of place in the internal organs and the tendency to develop sensations in connection therewith and to have these continually grow and increase, is a marked fact in connection with these cases, and it is a fact that those pains are largely artificial. I have seen cases where operation resulted in complete fixation of the kidney, and relief of the hydronephrosis and no recurrence whatever of the symptoms, but the patient would still complain as previously of the sensations which had become so customary during the prevalence of the disorder.

Dr. D. J. Hayes, of Milwaukee: I have listened with a great deal of interest to Dr. Ladd's paper on hydronephrosis. Ever since the day that Gustave Simon made the first successful nephrectomy for a penetrating wound of the kidney and ureter, advance has been made in the direction of conservatism. Ten years after Simon's first successful nephrectomy, Morris gave nephrolithotomy to the world, and Hahn gave nephropexy, both operations in the direction of conservatism, as, previous to this time nephrectomy was the only operation performed for all pathological conditions of the kidney, whether movable, cancer, calculous, nephritic or hydronephrotic.

Dr. Ladd in his paper did not discuss fully the treatment of hydronephrosis. The treatment of hydronephrosis, as well as all other surgical diseases of the kidney, began with the development of ureteral surgery. We owe much of the development of ureteral surgery to our late beloved Dr. Fenger, of Chicago, as he was the first to perform plastic operation on the ureter for valvular obstruction causing hydronephrosis; also ureterotomy for stricture in the upper part of the ureter, producing the same trouble.

Inasmuch as from thirty to forty per cent. of all cases of hydronephrosis are due to stones being impacted in the upper part of the ureter, it becomes imperative to have an X-ray examination made in every case of hydronephrosis presenting the history of stone in the upper urinary tract. The stone can be removed by the usual incision, somewhat extended for operating on the kidney down as low as the point where the ureter crosses the iliac artery. A number of cases of hydronephrosis, due to abnormal situation of the ureter in the pelvis of the kidney, were recently reported by Dr. Moylan in the British Medical Journal as cured. The ureter was cut completely across at its junction with the pelvis. The pelvic opening was closed by a purse string suture and a continuous suture outside of this. The distal end of the ureter was sewed into the opening made in the most dependent portion of the pelvis. The wound healed completely. The urine separator of Luys, passed some months later, showed normal urine coming from both kidneys.

With the further development of ureteral surgery the day may come when nephrectomy will be limited to malignant disease of the kidney and complete destruction by a pyonephrosis.

Dr. Edward Evans, of La Crosse: Hydronephrosis ordinarily means hydronephrosis caused by obstruction of the upper ureter, because when the obstruction is lower down the condition is secondary to some more grave condition, such as cancer of the uterus or fibroid tumor, or other condition of the pelvis causing some pressure, and which has to be primarily dealt with.

Those cases are very interesting and they are really rather easily dealt with, if we have made our diagnosis correctly. From an experience of some five cases, ranging all the way from hydronephrosis due to movable kidney,

to stricture, as described by Dr. Fenger, and kinking of the ureter due to an aberrant vessel, and another case of lateral implantation begin in the dilated pelvis, it seems to me if we recognize the condition and go about it carefully, it is rather an easy and successful operation. Every one of my cases has remained permanently cured. The important thing in the technic is to make your incision large enough, take your kidney entirely out and free the tissues so that you can identify them all. Of course you have to be careful of your blood supply. Then proceed according to the indications found. If it is a stricture, the operation as done by Fenger of splitting longitudinally and sewing it transversely, succeeds very well. An aberrant vessel causing the trouble is easily dealt with. If you have an enlarged pelvis and the ureter inserted high up (as happened in one of my own cases) make an incision along the ureter and the pelvis of the kidney to the bottom of it, and sew the posterior lower portion of the ureter to the posterior lower portion of the enlarged pelvis, and the anterior to the anterior in a similar way, and so obtain an outlet for the ureter at the lowest point of the pelvis, and your operation will be successful. The point that I wish to make is, when you have made your diagnosis, get a large enough incision, and expose thoroughly the parts where you wish to work, and you will find your future work rather easy.

Dr. A. H. Levings, of Milwaukee: I was much interested in the paper of Dr. Ladd. I will only say a few words in regard to the causation. It seems to me that not enough emphasis has been placed upon the congenital origin of this disease. In tabulating the causes Dr. Ladd said that there were intrinsic and extrinsic causes; but in the statistics a very considerable number were put down as of congenital origin. My experience in hydronephrosis has been that so far as I was able to determine at the time of operation the cause was often congenital, and very often the ureter was planted not at a right angle to the kidney, but very obliquely, so that when any urine accumulated in the pelvis the pressure of that urine against the pelvis and against the ureter would occlude the latter. Then I very often met with a kinking just as the ureter is given off from the pelvis, a stenosis or partial stenosis.

One point that Dr. Ladd made and which I would like to emphasize and which I think I can perhaps illustrate, is that the hydronephrosis is often the cause of the formation of stones instead of a calculus or calculi being the cause of the hydronephrosis. We know of course that anything which gradually or intermittently obstructs the ureter in any part of its course, will produce a hydronephrosis. In one of my cases I found an almost complete stenosis of the ureter just as it was given off from the pelvis, with the pelvis enormously dilated and filled with stones. The nurse counted 1,206 stones which we took out of the pelvis. This, I think, corroborates in a measure the Doctor's statement that obstruction often leads to the formation of stones behind it, rather than that the obstruction is very frequently caused by stones.

Dr. Ladd: I have nothing to add to the discussion except to say that I purposely omitted the detail of treatment with the few words that it was chiefly by surgical operation. My discussion of treatment by nephrorrhaphy referred to movable kidney. I thank these gentlemen for bringing out the other points.

A CASE OF TYPHOIDAL PERFORATION.

BY EDMUND W. HOLMES, A. B., M. D.,

Surgeon to the Methodist Hospital, Philadelphia, Consulting Surgeon to the State Asylum, Norristown, etc., etc.

X. X., 24 years, American, hatter, married, one child; uses tobacco in moderation, alcohol sometimes to excess; good health excepting what was presumably an attack of acute gastro-enteritis about ten years ago.

Was feeling perfectly well up to July 5, 1904, when, in company with six companions, he purchased a half barrel of beer, which they took to a boat house on the river, and quickly emptied. That afternoon he jumped overboard, without removing his clothing, and swam ashore; stretching himself on a bed for half an hour, and beginning to feel chilly, he returned home, thus not removing his clothing for four or five hours. For the next two days it seemed as if every muscle in his body ached, but he went to work "on a new job," where a small truck fell on him. He felt so badly he could with difficulty keep up, and on July 8 went to bed, under the care of a physician, hardly able to move on account of the general muscular soreness all over the body; the bowels were exceedingly loose.

Admitted to the Medical Ward, Methodist Episcopal Hospital, July 16. Pupils slightly larger than normal. Tongue slightly coated. Pharynx congested.

Lungs—Broncho-vesicular breathing over both bases, more exaggerated on right side. No râles, no cardiac murmurs.

Abdomen—Slightly rigid, gurgling in right iliac fossa, no rose spots, spleen not palpable, no localized area of tenderness, but moderate soreness all over abdomen (coinciding with the general muscular soreness). Widal, July 18, negative, leucocyte count 7100. Bowels which had been loose now constipated.

On admission: Temp. 99$\frac{4}{5}$, resp. 24, pulse 88.

July 16—9 p. m., temp. 103.

July 20—6 a. m. 101$\frac{3}{5}$, resp. 32, pulse 88; 3 p. m., temp. 98$\frac{2}{5}$, resp. 24, pulse 72.

I was called to see him for the first time, July 21, about 4 p. m.

At 3 p. m., temp. 98$\frac{4}{5}$, resp. 40, pulse 96.

The expression of his face was anxious—the abdomen was board-like—extreme tenderness everywhere, with a suspicion of being greater in the right lower quadrant; the pulse was of good quality, not cord-like, the breathing thoracic.

A consultation was asked for. In the absence of the other members of the medical staff, Dr. Lloyd responded at 8:30 p. m..

At 9 p. m., temperature 98⅕, resp. 32, pulse 112, leucocyte count 12,200.

The patient was suffering intensely, with pinched features, and an agonized expression. After a long discussion with the members of his family, to whom little encouragement for a successful issue was given, the operation being held out only as a forlorn hope, and the crisis being fairly explained to the patient, who consented only by reason of the intense pain, an operation was decided upon.

An incision was made in the right semilunaris, and, three feet from the valve, a perforation was found in the ileum, with feces pumping out at each stroke of the diaphragm, the intestine being tremendously congested; the peritoneal cavity contained a considerable quantity of feces. The opening was quickly closed with a continuous "Lembert" of fine cat gut, the intestine was wiped off while search was being made for other holes, irrigated with hot saline solution, and the abdominal incision was then closed and rubber drainage employed. The operation took twenty minutes—with the etherization thirty-one minutes.

The patient died about two hours later.

The case is peculiar in that the perforation occurred before it was recognized as typhoid fever. The history of a "booze" with some looseness of the bowels, followed by constipation, the extreme muscular soreness all over the body, the negative leucocytosis and the negative Widal test, with the symptoms of congestion of the lung, threw off the idea of typhoid.

Irrespective of this, local pain and tenderness, and rigidity of the abdominal muscles, with thoracic breathing should always give warning in a case of illness from typhoid fever.

Sudden pallor, dropping of the temperature with increased pulse rate are signs of shock. Rapid breathing, corded pulse, pinched features, great pain, fever, with distension, and general tenderness are signs of peritonitis.

Now, it is well known that we may have perforation before shock and peritonitis manifest themselves. Worse than that, perforation with shock and peritonitis already present, are deadly cases.

As surgeons, therefore, we must be prepared, at the call of the attending physician, to operate, when local pain and tenderness, abdominal rigidity and thoracic breathing, suddenly appear in an

attack of typhoid, especially after the fourteenth day, with the undoubted chance of occasionally finding no actual perforation, though in one case operated upon by a colleague, with recovery, only the peritoneal coat of the bowel was intact.

From the surgical standpoint, to be successful, operate as soon as perforation occurs, or better still *a little sooner,* but whether in our endeavor to forestall the risks of perforation we do not add to the dangers of those typhoids which do not puncture completely, time and experience alone can tell.

I am not one of those who believe opening the abdomen for the removal of a healthy appendix is a triviality—much less sanctioning such a procedure in the depression of the second or third week of a typhoidal attack. Nevertheless, I believe the coming surgeon, with the best record in typhoidal perforation, will be the man who is willing to operate early, thereby incurring the risk of sometimes opening a non-perforated patient—to say nothing of a mistaken diagnosis between "iliac thrombosis, appendicitis, and diaphragmatic pleuritis."

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CHRONIC CONTINUOUS SECRETION OF GASTRIC JUICE.*

BY L. F. JERMAIN, M. D.,
MILWAUKEE.

Chronic continuous secretion of gastric juice is a perversion of function of the stomach, manifested by the secretion of an excessive quantity of gastric juice, not only when the mucous membrane of the stomach is irritated by food, but also when the stomach is empty. The condition is characterized by the fact that large quantities of hydrochloric acid are secreted by the stomach when fasting. Reichmann deserves the credit of having been the first to study this subject with modern methods. Most authors consider chronic hypersecretion a secretory neurosis of the stomach; that certain nerve tracts transmit impulses that stimulate the secretion of gastric juice, either directly or reflexly, we know from clinical observation and from physiologic experiments. Beynard and Loge, for instance, stimulated the vagus of a criminal, who had suffered capital punishment, for 45 minutes

*Read before the 58th Annual Meeting of the State Medical Society of Wisconsin, Milwaukee, June 23, 1904.

after death had occurred and thereby caused a secretion of gastric juice in the stomach. Although hypersecretion, like motor insufficiency, is primarily a functional disorder, we cannot maintain that chronic hypersecretion is always a neurosis, even though anatomic changes may be absent or not demonstrable.

Opinions differ as to the frequency of this affection. Certain it is that if we were to examine the stomach contents of our patients after a period of fasting and after a preliminary cleansing of the stomach, we would more often meet with this condition. In our large cities where a greater part of the population is subjected to severe and continuous mental strain, associated with rapid eating, insufficient mastication and the abuse of food and drink, the disease is not at all uncommon. The frequent occurrence of ectasy of the stomach with chronic secretion suggests some relation between the two conditions. The fact that continuous secretion of gastric juice is seen without ectasy indicates that the latter condition is not the cause of the former; on the contrary, ectasy usually develops after hypersecretion has existed for some time, and its development is readily explained when we consider that the continuous presence of gastric juice must impede amylolysis, that the stomach is never completely empty, or never at rest, and that the increased acidity of the stomach's contents may cause pyloric spasm, thereby increasing the strain put upon the organ, leading in the course of time to dilatation. There are cases, however, in which ectasy apparently precedes the development of continuous secretion. Ectasy in these cases follows pyloric stenosis, the result of ulceration, and in turn is followed by hypersecretion. Little that is positive is known in regard to the causes of this condition. Vicious habits of rapid eating, insufficient mastication and the abuse of food and drink are undoubtedly responsible for many cases. The psychic excitation and severe mental strain to which our modern business man is subjected must be accused of causing, if not the disorder, at any rate the conditions leading to its development. Most cases that have come under my observation were in men of affairs, in most of whom neurasthenic symptoms were well pronounced. All observers agree that the condition is more common in men than in women—about two to one. Organic diseases of the nervous system, notably tabes, are often associated with chronic secretion. Korczynski and Jaworski have made many careful investigations into the anatomy of the gastric mucous membrane removed in operations on gastric ulcers complicated with continuous secretion of gastric juice. The mucosa was found thickened, with small cell infiltration under the surface epithelium, which extended downward between the inter-glandular tissue into the sub-mucosa. The peptic cells were

degenerated, but the parietal cells were well preserved. The question whether these changes exist in the relation of cause or effect is an open one. Continued irritation of the mucous lining of the stomach, particularly if associated with stagnant ingesta, certainly produces gastric changes such as have been found by these investigators.

Riegel believes that we are not justified in regarding continuous secretion of gastric juice as a form of chronic gastritis, although the changes commonly found in this disease may occasionally be present. The symptoms of this disorder vary from mild and only occasional dyspeptic disturbances to those which in severity rival an advanced case of carcinoma of the stomach. The symptoms in general resemble those seen in cases of hyperchlorhydria with this difference, that the pain often occurs before eating or a few hours after eating, when the stomach is empty. On careful inquiry into the history, we will find that, as a rule, the symptoms appear gradually with a feeling of fullness or pressure, and sour eructations at the height of digestion. Pain is rarely absent in pronounced cases of this disorder. It is burning and gnawing in character, and occurs at the height of digestion, or when the stomach is empty.

Patients often complain of awaking at night with pain which is not relieved until vomiting takes place or some food is eaten. One of my patients, who suffered severely from attacks of nocturnal pain, was in the habit of securing relief by irritating his pharynx with his index finger, thereby inducing vomiting. The vomitus usually consists of gastric juice with some amylaceous material. The pain is often of a colicky nature, due to spasm of the pylorus brought about by the irritating acid contents. Vomiting of blood is not uncommon and, unless careful examination of the stomach contents is made, leads to serious error in the diagnosis. Vomiting is apt to be severe in advanced cases with marked ectasy of the stomach, and the amount of material may be so large as to indicate organic pyloric obstruction.

Hemorrhage from the stomach in hypersecretion does not always proceed from an ulcer, for excessive irritation of the mucous membrane may lead to hemorrhage even without actual ulceration being present.

Hyperchlorhydria and hypersecretion are recognized as predisposing to ulcer, and if such ulcer is situated in the pyloric region, cicatricial stenosis of this part is apt to develop, leading to gastric insufficiency and secondary ectasy.

Kussmaul, in 1869, first called attention to the occurrence of tetany in dilatation of the stomach associated with chronic hypersecretion. This complication, although rare, is a serious one, as most

reported cases have terminated fatally. The most satisfactory theory is the one which attributes the tetanic spasms to auto-intoxication from the intestinal tract.

Bouveret and Devic claim that the hypersecretion of the stomach and the formation of pepto-toxins in the presence of free alcohol is the most important factor. Another theory is that the tetanic spasms are caused by the loss of fluid from the tissues. In advanced cases the patient is usually emaciated, anemic, the skin dry and inelastic and the muscles flabby and atrophic, presenting the picture of carcinoma of the stomach. The appetite in a large majority of cases is good, even voracious. The desire to eat at frequent intervals is common, due, no doubt, to the fact that the pain is relieved by eating. The thirst is increased with the appetite, especially in cases associated with marked ectasy, and the clinical picture may be that of diabetes mellitus. The bowels are usually constipated and the urine is scant and high-colored, especially when vomiting is frequent. On physical examination, sensitiveness to pressure is found over the stomach, especially over the pyloric region. Increased resistance is often felt, and a circumscribed thickening in the pyloric region may be demonstrable. Inspection alone will often determine ectasy, the outlines of the stomach being clearly distinguishable upon the abdominal walls. By careful palpation the position and size of the stomach can often be determined. Splashing sounds can be elicited at times when the stomach should be empty, and, although not diagnostic of hypersecretion, are an important aid in determining the size of the stomach and the presence or absence of motor insufficiency. Stiller's sign, "a floating tenth rib," I have observed in one of my cases of chronic secretion associated with ectasy and motor insufficiency, in a highly neurotic patient.

In the diagnosis of hypersecretion, the examination of the stomach contents is of greater importance than external examination of the organ. The stomach contents must be obtained at a time when the stomach is empty of food. Reichmann first suggested examination of the stomach contents at a time when neither food nor drink had been introduced for a considerable period of time. At first the stomach is washed out, food is withheld for ten or twelve hours, and then it is determined whether or not any appreciable quantity of gastric juice is present in the stomach. Any quantity above 30 cc. is considered abnormal. In well marked cases of chronic hypersecretion an abundant fluid mass will be obtained which separates into three layers and gives a pronounced hydrochloric acid reaction. The acidity often amounts to 80, 100, or even more. If pronounced ectasy and

motor insufficiency are present at the same time, the fluid is apt to be foamy, which indicates gastric fermentation.

In any case in which this condition is suspected, the stomach should be thoroughly cleansed in the evening, no food taken, and aspiration done the next morning for chemical examination. If a large quantity of gastric juice is present, it is positive evidence of the existence of chronic continuous secretion.

The course of the disease varies greatly according to the presence or absence of complications, such as ulcer, ectasy, pyloric stenosis or tetany. In severe complicated cases, the prognosis is not favorable—emaciation, exhaustion, hemorrhage or tetany all endanger the life of the patient.

A positive diagnosis of this condition should never be made from the clinical picture alone, as it may closely resemble that of ulcer, cancer or hyperchlorhydria. Only repeated examination of the stomach contents at a time when food has not been taken for some time, will warrant us in making the diagnosis.

The treatment of these cases is at best unsatisfactory, as it is difficult and often impossible to determine the cause of the perversion of function. Bad habits of eating should be corrected. Only such foods that stimulate the secretion of gastric juice in the least possible degree should be allowed. Strongly irritating substances and very hot or very cold articles of diet are to be avoided. The amylacea should be reduced as much as possible and eaten only after a preliminary cleansing of the stomach. The diet should be concentrated and nourishing and is to consist chiefly of proteid and gelatinous articles. Milk is to be recommended in all cases. Lavage of the stomach is the remedy *par excellence* in the treatment of this condition, especially in cases in which ectasy and motor insufficiency exist. Washing of the stomach before partaking of a meal places the organ in the best possible condition to digest what amylaceous material is introduced. If the washing is done before the evening meal, nocturnal pain and vomiting are usually prevented. Carlsbad salts administered in the morning before partaking of food, is helpful in neutralizing any acid present and removing it from the stomach. Douching of the stomach with silver nitrate solution is of distinct service. Penzoldt recommends boric acid in the strength of 10 to 1000. Alkalies, such as Carlsbad water, magnesia-usta, sodium bicarbonate, are indicated at the height of digestion or with the meal. Strychnin is indicated in all cases in which deficiency of motor power of the stomach is evident. Surgical interference is advisable only in cases complicated by chronic ulcers, pyloric stenosis or severe ectasy.

Discussion.

Dr. W. H. Neilson, of Milwaukee: We have all listened with a great deal of interest to the very excellent exposition the Doctor has given of this condition or disease which we find frequently enough in our practice to make us trouble. He has given us a picture of the cases, as we usually find them, and I believe his paper to be eminently practical.

The only room for discussion that I see is in the matter of diagnosis. As far as the treatment is concerned we all agree. Whether we have a case of continuous secretion associated with gastric ulcer, or some kink in the duodenum or the pressure of a floating kidney, or a gallstone, or whatever other condition may offer an obstruction, as far as the medical treatment is concerned, the one proposed is the one we should give.

However, I notice that authorities are not all agreed in regard to the classification of these cases. Reichmann, to whom we owe a great deal, in 1882, gave the first clear description of the condition, and he was followed by Weigel. Their definition of it is that it is a disease of nervous origin, where there is a hypersecretion of the gastric juices. Now they do not take into consideration the fact, as I understand their writings, that the presence of food is the exciting cause of the secretion. Other observers such as Eichhorn and Hemeter, claim that cases of chronic secretion of the gastric juice are very limited in number. They would limit them to those cases where there is no pathologic lesion discoverable in the stomach. They would exclude all cases of dilatation, cases associated with ulcers, with cicatrices or tumors forming obstruction to the free outflow of the stomach. They would limit the disease to those cases in which after a thorough washing out of the stomach the evening before, there is found the next morning 30 c.c. of stomach contents containing hydrochloric acid and no food. They lay great stress on the necessity of there being absolutely no food in the stomach contents. If there is food present they exclude the case from this nosology.

It is a pretty difficult thing to determine whether every case is one of dilated stomach or not and to determine whether it is one containing a round ulcer or not—we have a great many conditions to consider. When we speak of dilated stomach we ordinarily think of determining it by measuring the amount of contents rejected and the size of it when filled with water or air, and so diagnosing it a case of dilated stomach, but in many cases we find there are adhesions and we cannot, by palpation or percussion, determine that the stomach is enlarged; it may be held high up and may enlarge laterally or outwardly, and in such cases we might not determine whether the stomach was dilated or not and a false diagnosis result.

While practically it does not make a particle of difference, I believe it is a matter of some curiosity to know whether we are to give this name, chronic secretion of gastric juice, to all cases where we find in the morning after the stomach has been thoroughly washed out the night before, containing hydrochloric acid irrespective of presence of food, an amount of gastric contents above 30 c.c. ,or whether we are going to restrict it to those cases where there is no pathologic condition found in the stomach or anatomic lesion offering an obstruction to the outflow of its contents, and yet where there are over 30 c.c. of contents free of food and containing hydrochloric acid.

Dr. Wilhelm Becker, of Milwaukee: I think it is of the greatest practical importance to differentiate whether the hypersecretion is caused by

retention of food in the stomach or whether there is a simple so-called neurosis. This differentiation is only possible if the chemical constituents of the stomach contents are determined. The amido-compounds, the products of proteid decomposition, no matter whether due to peptonization or abnormal fermentative processes, are powerful stimulators of gastric secretion. Pawlow has proved this in his great experimental work on the function of the digestive glands. These amido-compounds need not even be present in the stomach to produce secretion; if present in the oral cavity of a dog whose esophagus is ligated, profuse gastric secretion will ensue. The practical application of this fact is evident; it explains the frequent occurrence of hypersecretion together with or in consequence of putrefactive processes in the oral cavity.

In cases where the aforementioned etiologic factors are present, we are not dealing with the true neurosis; an entirely different pathology prevails and a totally different plan of treatment is called for.

There is another source of error in the diagnosis of this disease: In atrophic gastritis with dilatation, even where considerable motility is still present, there is a disturbance of the osmosis through the mucosa of the stomach. The mucosa has lost its equilibrating power. Water instead of being absorbed from the gastric lumen remains therein or is even thrown into the gastric cavity from the vascular system. In patients where this occurs we find considerable fluid in the stomach when it ought to be empty. But if this fluid be tested for its constituents, no hydrochloric acid or pepsin can be discovered. This occurs frequently in drinkers and causes the familiar vomiting in the morning.

I fail to see how chronic continued secretion of gastric juice could be mistaken for carcinoma.

The cases of the true neurosis are extremely rare, are very obstinate, and occur, at least in my experience, most frequently in young female adults. I do not think the cases here so ably described by Dr. Jermain were true cases of the neurosis.

Dr. Jermain: I tried to make it clear in my paper that chronic hypersecretion is not a disease but simply a condition, which may exist independently of other diseases of the stomach and also in association with them. Reichmann, Riegel and others limit the term to cases in which no other irritant to the mucous membrane of the stomach save disturbed innervation, can be found. It is doubtful whether a case with pyloric stenosis in which dilatation with retention has developed can be classed as one of chronic secretion, as the retained food acts as an irritant to the gastric mucous membrane. All cases, however, in which there is continuous secretion of gastric juice in the absence of food as an irritant can, I believe, be properly called chronic hypersecretion.

Of greatest importance, as Dr. Neilson has said, is the diagnosis of this condition. Hyperchlorhydria and hypersecretion are often mistaken for each other, but that is an error which is of little consequence to the patient. The treatment is the same. Of graver significance is the differentiation between this condition and cancer of the stomach, and it is only by careful chemical examination of the stomach contents that mistakes can be avoided.

I believe that the diagnosis and therapeutics of diseases of the stomach are to-day upon a less scientific basis than those of any other part or organ

of the body. There can certainly be nothing less scientific than the administration of dilute hydrochloric acid after meals to these patients, and yet it is done.

Cases come to our office complaining of dyspeptic disturbances, and we prescribe the conventional mixture of hydrochloric acid and pepsin, and send them away suffering more than before. I wish to make a plea for the more extensive use of the stomach tube in the diagnosis and treatment of diseases of the stomach.

ESTIMATION OF INDEMNITY IN THE CASE OF LOSS OF VISION, ESPECIALLY LOSS OF ONE OR BOTH EYES.*

BY H. V. WÜRDEMANN, M. D.,
MILWAUKEE.

The writer has been particularly interested in the subject of Visual Economics since 1897, when his attention was called to the writings of Prof. Dr. Magnus, of Breslau, Germany, and those of other German authors. He has accepted the theories and deductions of Prof. Magnus, but has attempted to simplify them in order to render them more acceptable to the ordinary skilled practitioner of medicine or law.

Prof. Magnus stopped his work with the determination in percentage of the damage to the earning ability. The author has applied these rules still further and has estimated the actual pecuniary loss to the individual by reason of visual imperfections. This was as far as the subject was completed up to the period of the publication of our work, Magnus and Würdemann's "Visual Economics," Jan. 1, 1902. Since that time it has been discovered that certain business relations must be applied to the amount of economic damage when cash payment is to be made for the same, and we therefore have to reduce the amounts given by our examples in the book by true discount, which gives the present value of the economic damage. To this amount in legal cases there should be empirically added certain sums for the expense of the illness, loss of time, for pain or mental anguish, to the date of the judgment.

As regards accident insurance, it is astonishing how closely the amounts empirically allowed by these business corporations correspond to our deductions. They all allow total disability or the full amount

*Read before the 58th Annual Meeting of the State Medical Society of Wisconsin, Milwaukee, June 23, 1904.

for total blindness. As regards the loss of one eye or its sight, the ratio differs. Business demands, together with the results of our researches, may result in an official valuation of the loss of sight of one eye as well as other economic damage from ocular injuries.

In the following the author has made an abstract from his previous writings.

CONCERNING THE ORIGIN OF COMPENSATION FOR BODILY INJURIES.

The earliest form of compensation for bodily injuries arose by evolution of the action of defense from attack, as is exemplified in the ancient Babylonian and Egyptian decrees, likewise adopted by the Jews and becoming incorporated into the Mosaic laws, which placed upon the person causing an injury the penalty of suffering a like injury, as is shown in the Biblical quotation, "An eye for an eye," etc.

About the time that a medium of exchange was established, the sufferer or family was accustomed to demand monetary or other compensation in return for the bodily injury.

Modern laws have evolved from these customs, which, however, are radically different in various countries. The person may have previously made a business contract with a second party, paying a certain sum (usually in instalments called premiums) by which in case of an accident he will be entitled to receive from the second party a certain lump sum, upon proving the amount of bodily damage. This is the modern principle of accident insurance, which has been evolved from the ordinary principles of life insurance. The other form of compensation is more directly connected with the ancient idea of vengeance or blood money, and is reckoned in law as damages.

LEGAL COMPENSATION IN THE UNITED STATES OF AMERICA.

In fixing the value, cost, or price, as it may be termed, of any injury, the rule of compensation must be applied to each individual case, and this for many forms of accident or injury is a most difficult matter. Our common law holds that "compensation is the basic principle of the law of damages, the measures thereof being limited and controlled, and the elements of recovery primarily determined by this fundamental consideration." We are also told by the books that "There are frequently elements involved so wholly insusceptible of money valuation that the measure of recovery must be left largely, if not entirely, to the discretion of the jury. This is noticeably the case in actions for damages for personal injuries where physical suffering has resulted, and, likewise, where mental distress has been a consequence of the defendant's act."

MEASURE OF DAMAGES.

Damages is defined by Taylor as "the injury or loss for which compensation is sought," and the measure of damages refers to the amount or extent of such injury or loss. Three distinct classes are recognized and awarded to suit the merits of the case:

Nominal Damages, or some trifling sum which is awarded when a breach of duty or infraction of the plaintiff's right is shown, but no serious loss is proven to have been sustained. Such are awarded for violation of a plaintiffs' right, but where no damages are shown by the evidence.

Substantial or Compensatory Damages: These are such as are designed and awarded to compensate for the actual loss or injury sustained. The jury weighs the evidence and fixes the amount which in their opinion properly compensates the injured party for the loss suffered.

Exemplary, also termed vindicative, or punitive damages: This class exceeds the loss actually sustained, and is given as a kind of punishment to the defendant.

Thus, in the United States the price to be paid as compensation for an injury is left to a jury trial, which, unless the verdict be so excessive or grossly inadequate as to indicate passion, prejudice, or corruption, will generally be allowed to stand, though the courts presiding in such cases have always asserted and exercised the right of setting aside such verdicts as, in their judgment, are so wholly disproportionate to the injury suffered as to indicate passion, prejudice or corruption on the part of the jury.

In no other class of cases does the amount of damages rest necessarily so largely in the discretion of the jury as in those involving a recovery for the infliction of personal injuries, and the courts are very loath to interfere with a verdict in such cases in the absence of plain evidence that the jury have abused the discretion vested in them.

RECENT JUDGMENTS IN THE UNITED STATES OF AMERICA FOR GENERAL INJURIES.

I have collated a number of recent judgments that have been awarded in the courts of the United States of America for damages for loss of, or injury to, vision, and it is a remarkable fact that injuries of such character are generally rated by the complainant more than in the case of suits for the loss of life. In some of our states the extreme amount of compensation that may be received in consequence of loss of life is rated at $5,000, whereas in the same states loss of a bodily member has been adjudged many times this amount. The lim-

itations, however, regarding the amount of claim for loss of life to $5,000 has been removed in many states.

For injuries resulting in death the verdicts which have been rendered and sustained by the courts of the country, in the nature of things, show the greatest possible variation, and it would serve no useful purpose to undertake to classify them. It would seem but natural that verdicts in such cases should run higher than in cases resulting in the loss of a limb, but it is a curious fact that such is not ordinarily the case, and the well-informed personal injury agent and railroad attorney would ordinarily prefer to defend a case of an injury resulting in death rather than one resulting in permanent disability. The reason is not very obvious, though it is sometimes accounted for by the fact that a jury has more sympathy for a permanent cripple than for the heirs or representatives of a dead man, whose injuries are covered by the grave. Like all other rules, this one has its exceptions, and a pretty widow and orphan children, as plaintiffs, have frequently caused verdicts to rise very high in the scale when compared with the earnings of the deceased.

To show the difference in the judgments awarded by the different courts, the following may be of value:

The loss of a leg was held to justify a verdict of $2,300 in the William Branfoot case, reported as "52d Federal Reports," and the loss of both legs a $15,000 verdict by the courts of Arizona, a $13,000 verdict by the courts of Colorado, and a $25,000 verdict by the courts of Illinois. The difference in amounts in these cases doubtless depended on the different state of facts presented in each case. The loss of both legs to a common laborer earning a dollar a day, would be a very different thing, when measured by dollars and cents, to the loss of a leg by a civil engineer whose salary was $10,000 per annum. The loss of a foot was held to justify a verdict of $9,000 by the Supreme Court of Georgia in the case of Georgia Railroad, etc., Co. vs. Keating; and a verdict of $11,000 by the Supreme Court of New York in the case of Jordan vs. New York Central R. R. Co., and in the case of Comerford vs. Atlantic Avenue R. R. Co., the Supreme Court of New York sustained a verdict of $8,500 for the loss of several toes.

In the case of the loss of an arm a $5,000 verdict was sustained in one case by the courts of Arkansas, an $8,000 verdict by the Supreme Court of Illinois, a $4,000 verdict by the Supreme Court of Iowa, and a $9,119 verdict was sustained by the Supreme Court of Texas in the case of Missouri, etc., R. R. Co. vs. Kirkland, while the Supreme Court of Wisconsin sustained a $10,000 verdict for the same injury.

The loss of a hand has been variously estimated by approved verdicts ranging from $1,250 to $5,000 in cases reported by various courts. The loss of fingers has been the prolific mother of many damage suits, and the verdicts have ranged all the way from a few hundred dollars to $8,500, which was the amount of the verdict in the case of Ridenhour vs. Kansas City Cable R. R. Co., in which case all the fingers on one hand were disabled.

In the above it is shown that a large estimate is fixed upon the amount of physical suffering, which may not only be corporal but mental, and the latter factor is a difficult proposition, for it is hard to measure mental distress by the standard of the dollar.

It must be patent in the outset to every thinking mind that the value or cost of all injuries must, in the nature of the case, be extremely relative. The loss of one's eyes would not mean the same in dollars and cents, at least, to the day laborer and to the accomplished surgeon. The loss of life itself would not mean the same in dollars and cents to the family of a young, vigorous man who gave promise of many years to live, and of a man earning the same salary whose age and infirmity were such as to render it certain that his labors were almost at an end.

It will be remembered that it is the province of the courts not only to set aside verdicts which are considered excessive and oppressive, but it is also their province to set aside such verdicts as, in their judgment, may be inadequate, and it will be of interest to the profession to know that, so far as my investigation has gone in the leading legal authorities on this subject the highest verdict which is reported to have been set aside was that in favor of a physician. I refer to the case of Phillips vs. London, etc., R. R. Company, reported in "29th Moak," on page 177, where a verdict of £7,000 for "injuries sustained by plaintiff through the negligence of the defendant," was set aside as inadequate on the ground that "the jury must have omitted to take into consideration some of the elements of damage." "The plaintiff, who was a physician in the prime of life, having a practice worth, perhaps, £7,000 ($35,000) per annum, was reduced by the injury to a condition of helplessness, with every enjoyment of life destroyed, and with the prospect of a speedy death."

While at first thought, it would seem that a verdict of $35,000 appears pretty large, and while any railroad company which was called on to pay that much would consider itself pretty unfortunate, still, when it is remembered that this amount only represented about one year's earnings of the plaintiff in the case, that his life was rendered a burden and greatly shortened by the accident, it is manifest that the verdict should have been set aside as utterly inadequate.

RECENT JUDGMENTS IN THE U. S. OF AMERICA BY THE APPELLATE AND SUPREME COURTS OF THE STATES FIXING DAMAGES FOR EYE INJURIES.

I have collected a number of recent cases in which damages were given by the lower courts and sustained as reasonable verdicts by the higher, for injury to vision.

One striking thing about this class of cases, so far as the Amer-

ican cases are concerned, is the comparative fewness of them, at least the number that have found their way into the appellate courts is small.

I can find only two in which a woman was the complaining party. In only one did the appellate court exercise its power in decreasing the amount of damages assessed by the jury. In most of them I think much larger verdicts would have been sustained. On the whole, the verdicts do not seem to be at all liberal in amounts. On the other hand, the plaintiffs in many cases were laborers without great earning capacity.

$5,000 held not excessive: Section boss, 35 years old, lost one eye and had sight of the other affected every time he took cold; working capacity was reduced one-half. (No showing in report of any other element of damage.) Johnston vs. Mo. Pac. Ry. Co.

$3,000 held not excessive: Porter, age not given, one eye totally lost, use of other more or less impaired, although no finding that impairment was permanent. Expense incurred $100; no proof of loss of earning power. Jones vs. St. Louis & S. W. Ry. Co.

*$5,000 held not excessive: Farmer—one eye lost—no proof of any damage other than this, court assuming that his earning capacity was impaired. Texas & C. Ry. Co. vs. Bowlin.

$5,000 held not excessive: Traveling salesman, 43 years old, earning $190 and expenses, eyesight of both eyes so seriously impaired as to incapacitate him for business, also severely cut in various parts of his body (train wreck). Missouri, K. & T. Ry. vs. Huff.

$5,000 held not excessive: Man suffered, apparently, loss of one eye; age not given, nor occupation, nor any fact in regard to expense or extent of suffering. Palmer vs. Delaware & Hud. R. Co.

$7,000 held not excessive: *Woman*, age not given, occupation not given; married or single not stated, suffered loss of sight of one eye and had it permanently disfigured. Injury very painful. Caused by flying glass. Shaw vs. Chicago & Grand Trunk Ry. Co.

$9,000 held not excessive: Total loss of sight—man—age, earning capacity, nor other fact appearing. Stearns vs. Reidy.

$3,000 held not excessive: Locomotive engineer, age not given and no data except fact of loss of one eye and consequent disability to perform usual work. E. St. Louis vs. Dougherty.

$2,000 held not excessive: Roustabout in mill, 22 years old, one eye, no other data. 70 Mo. App., 209.

$15,000 recovered, reduced on appeal to $10,000: Laborer, 23 years old, burned in eyes by molten slag, sight of one eye completely gone and the other seriously injured. His own physician testified to there being 30 per cent. normal vision in remaining eye. No data about suffering, expense, etc. Ribich vs. Lake Sup. Smelting Co.

*This Texas verdict is eclipsed by a judgment in Boston of $18,500 given June 10, 1904, to a stenographer for loss of an eye from alleged negligence of a railway corporation. This shows what a sympathetic jury will do for a young and pretty woman.

$100 was sustained by the Supreme Court of New York for an injury described as "a black eye."

$14,000 was sustained in the case of Wallace vs. Vacuum Oil Company, decided by the Supreme Court of New York, in which the injury is described as "the loss of eye and other serious injuries."

PROTECTION OF WORKMEN IN AMERICA AGAINST ACCIDENT.

Our own workmen are protected by various laws for the regulation of machinery, of different natures in the several states, and in the case of public carriers, as the railway and steamship companies, by Interstate Commerce Commission and by their own stringent rules, which have more to do with conservation of the public safety and their own goods and machinery than with the individual workmen.

Study of the appalling list of accidents occurring annually in American industries has led employers to employ many modern devices for making factory work safer and more healthful. The policy of doing this is profitable as well as humane, for it makes workmen brisker and contented.

Devices have been put into use, moreover, to prevent accidents, and provision has been made to attend to the men injured when accidents occur. Ten years ago an accident would drive a factory engineer away from his throttle at the critical moment. Nowadays a shop-girl may shut down the most ponderous engine by pressing a button. Accidents do happen, however—many of them. In the best regulated factories the victim goes to the factory hospital.

In case of negligence being shown on the part of the employer by reason of defective tools, surroundings, or placing the men at extra dangerous work for which they have not specially contracted and from which circumstances accidents arise, the workmen are entitled to recover by law some compensation. In all such suits, however, the compensation asked is more and ofttimes many times the amount that should be allowed. *We claim that all compensation, not alone that to be given as the result of claims at law, but also claims for insurance, should be regulated by the amount of the economic damage.*

ACCIDENT INSURANCE IN AMERICA AND GREAT BRITAIN.

Accident insurance in American and British companies is a purely mutual and financial arrangement made between the applicant for insurance and the company which underwrites the policy, whereby the applicant agrees to pay a certain amount annually, usually in one payment, but which in some companies may be by monthly or quarterly payments, and in others by assessments called at times by the officers when the exchequer of the company needs replenishing. This contract

is either a valued policy fixing a definite sum in the event of loss of vision in one or both eyes, or less of arm, or leg, or other bodily organ, or a definite weekly indemnity for total or partial loss resulting from injuries. The principal amount is paid when the injury totally disables the insured from performing all his duties, and when it disables him from performing one or more, partial indemnity is paid. This rule naturally holds in cases from other than ocular causes.

The estimation of pecuniary indemnity in cases of partial or complete loss of vision from accident depends upon the form of policy which the insured has purchased. Some of the companies grade their patrons into various classes, according to their occupation. If, for instance, this is such as to entitle the insuree to the select or preferred classes, the indemnity payable for loss of sight of both eyes is equal to the full amount of the insurance, being placed upon the same basis as a fatal accident.

The loss of the entire sight of one eye is compensated for by payment of one-eighth to one-third of the amount that would be paid for death or loss of both eyes. If the loss of sight be temporary and results in the insured being unable to perform his duties of his occupation, he is indemnified for loss of time only, just as though he were injured in any other organ.

A number of companies issue policies for loss of an eye, or other organs, or loss of time from disease, which are called "health policies," the indemnity as a rule not exceeding 100 weeks of total disability.

Payments by insurance companies for loss of sight were originally arbitrarily fixed by a few companies, and the others have followed in their lead, all of them being materially conducted on the same rules.

There are fifty-five casualty insurance companies doing business in the United States, of which twenty-four are stock accident insurance companies and thirty-one assessment accident associations. I have corresponded with all of them, receiving specific replies.

PENSIONS BY THE UNITED STATES GOVERNMENT FOR DISABILITY DUE TO THE EYES.

The United States Bureau of Pensions, according to personal letter, dated April 19, 1904, from the Commissioner of Pensions, Mr. E. F. Ware, gives the following rates of pensions for disability arising from accident or diseases of the eyes.

Total blindness of both eyes, $100 per month; loss of sight of one eye with loss of eyeball or destruction of same, $17 per month; loss of sight only of one eye, $12 per month.

Partial disability from accident or disease of the eyes, $2 to $72

per month, depending upon the estimated degree of disability in respect to manual labor.

He states that these rates have been estimated wholly empirically.

PROTECTION OF WORKMEN IN ENGLAND AGAINST ACCIDENT.

Nearly a century ago, the necessity for legislation designed to protect workers in textile factories was realized. In the year 1802 an Act was passed for the Preservation of Health and Morals of Apprentices and others employed in cotton mills. The statutes of 1833 and 1845 brought under inspection the manufacture of several materials other than cotton and wool. Subsequent Acts regulated employment in print works, bleaching and dye works, and the manufacture of lace; but the Acts passed in 1864 and 1867—afterwards embodied in the Act of 1878 (the principal Act)—practically included almost every occupation in the country.

The Factory Act of 1891 provided in Sections 8, 9, 10 and 11, what was universally accepted as a legal remedy based upon principles of humanity, moderation, and common sense. Power was given to the Secretary of State to frame special rules and requirements as to dangerous and unhealthy incidents of employment.

Penalties were provided for the contravention of special rules duly established. Schedule 1 of the Act of 1891 described in minute detail the methods of procedure when arbitration had to be resorted to.

THE GERMAN ACCIDENT INSURANCE LAW.

Several years ago the appearance of German medical legal essays upon accident insurance, called my attention to the paternal system in vogue in the German Empire, and especially to the law of July 6, 1884. Paragraph V. defines its intentions as follows: Compensation for the loss resulting from bodily injury or death is to be adjusted according to the following provisions:

(1) The cost of necessary treatment commencing at the beginning of the 14th week after the accident.

It will be noted that this Insurance Law deals only with the results of accidental injuries after the 14 weeks have elapsed from the date of the accident. The reason for this may lie in the fact that most German manufacturers pay their City Hospitals certain sums (which have been retained from the workmen's wages) for the care of their sick employees, and indemnification for accidents is considered due only after the lapse of 14 weeks.

(2) A regular income to be paid to the injured person from the beginning of the 14th week during the time of his inability to work.

The wording of the law shows that neither the injury itself nor

any temporary results, such as the detention from work or the expense of treatment up to the 14th week thereafter, is considered grounds for indemnification, but it relates solely to the effects when they have had a more permanent detrimental influence upon the earning powers.

POSITION OF THE PHYSICIAN IN RELATION TO ESTIMATION OF DAMAGE TO VISION FROM ACCIDENTS TO THE EYES AND INDEMNITY THEREFOR.

My attention was next directed to the estimation of the economic damage from loss of eyesight by the writings of Prof. Dr. Magnus, of Breslau, with which you are familiar, and during the last four years I have had much pleasure in studying the subject and in writing a number of essays thereon, some of them with the collaboration of Prof. Dr. Magnus, who has evolved what is generally considered an acceptable mathematical formula whereby the percentage of damage to the earning ability may be figured for any and all kinds of accidents to the eyes. We believe that the estimation of the corporal and economic damage from injuries belongs to the physician and that the expert is enabled to so testify in any case that the courts and corporations may estimate the monetary compensation in a manner that is just to all parties.

Foerster considers that the duty of the physician is only to attest to the kind of injury, leaving the estimation of its effect upon the earning ability to the trade association. To this we cannot agree, for instance, what help will it be to the insurance officials or to the average juryman if we inform them that a certain injured person has suffered from "a paralysis of the musculus rectus externus sinistra?" In order to properly judge of the relations between the laming of an ocular muscle and the earning capacity, technical physiologic knowledge is certainly needed, and, verily, we cannot expect a tradesman to have a scientific mind. A physician can acquire a knowledge of the technical peculiarity of the different trades much sooner than the trade association can get even a modicum of medical knowledge. There are but few vocations with which a physician does not come in contact. Wagner states that it is the duty of the physician to acquire some knowledge of the trades of the patients with whom he deals, as by this means he is enabled to estimate the relation of the injury to the loss of the earning ability. To the foregoing we heartily agree. It is the province of the physician to estimate the proportional loss to the earning ability resulting from disease or traumatism, for who among men is from his training and daily work so well qualified, and whose business brings him into closer relations with such economic problems?

THE SCIENTIFIC BASIS FOR ESTIMATION OF THE EFFECT OF LOSS OF VISION UPON THE EARNING ABILITY.

A considerable proportion of all accidental injuries are cases where the eye and vision have been hurt. The various accident insurance companies pay out a considerable percentage of their losses for eye injuries, and in suits for damages for personal injuries, a large proportion have to do with the eye. Of these a great number claim loss of sight of one eye. Despite this fact, no definite agreement was reached in medical or legal circles regarding the effect of the loss of one eye, to say nothing of the various and complex injuries that are common, until a few years ago when the German law set a standard. In this country the subject was all in chaos until I brought out the opinions of Magnus, backed by the German laws of several years ago.

Upon the use of the organ of vision depends the earning powers for the large majority of trades and professions, and thus earning ability is economically synonymous with visual earning ability.

It is self-evident that a totally blind person is absolutely incompetent in any trade or profession requiring eye-sight. An economically blind person, *i. e.*, one whose visual acuity is less than 5 per cent. of the normal, is in the same position; for, although he may be able to get about, the vision is not sufficient to allow of even the lowest grade of remunerative work. The vast majority of blind people are not only incapable of earning anything, but are a charge upon their families and upon the community. It is true that there are certain exceptions to the above proposition. There are and have been blind persons who have become poets, machinists, chair-makers, broom-makers, etc., but cases that have become economic factors are so unusual as to be commented upon in the public press and held up as especially talented and well-placed persons, who, by great labor of their teachers and by their own exceptional diligence, have been so highly educated as to be able to meet in a measure with the competition of normal individuals. In the case of an adult suddenly becoming blind, his previous economic education goes for naught, and he at once steps out of the ranks of workers.

Nearly all trades and professions require good eye-sight; even the coarsest sort of labor being affected if the vision falls below 50 per cent., and being impossible if it is below 5 per cent. of the normal visual acuity. For finer kinds of work, the visual range is between 75 per cent. and 15 per cent. A working man who either suddenly or gradually becomes blind loses his job. Aside from the loss of time and wages ensuant upon the injury and convalescence therefrom, poor

sight certainly affects the amount and character of work, the quality and output diminishing in a direct ratio to the loss of sight, until a degree is reached where the person cannot work any more. The amount of remuneration for work necessarily depends upon its amount and its quality. Thus, injury to vision generally necessitates loss of earning powers. Statisticians average man's value at $600 a year. Each worker in wood, iron or brass stands for an engine or industrial plant worth $10,000, producing at 6 per cent. an income of $600. The death of an average workman, therefore, is equivalent to the destruction of a $10,000 mill or engine. The pecuniary value of a man's life may, for our purposes, be expressed by the amount of money that he may earn in the course of his life. We stated that the visual earning ability was economically synonymous with the full earning ability, and we may thus value vision with the pecuniary value of life, *i. e.*, the wages of the individual.

We may say that "sight is priceless," and "vision is not a commodity that may be purchased or disposed of in the market," for there are few persons who would voluntarily allow of the infliction of any unnecessary bodily injury for any compensation whatever; but such matters of ethics do not fall within the pale of our present discussion. We are dealing with the established economic fact that injury to vision of more than a certain extent necessitates limitation of the amount and character of work. Following upon this, it is easily deduced that the amount of wages received would be less. The question now arises, how are we to reckon the loss of wages? This we may do from experience in examining large numbers of individuals, as it has been found that the loss of vision of a certain amount results in a certain average percentage effect upon the earning ability of the individual. We may also deal with futurities, and figure the probable loss in any given case by finding the percentage of damage to the normal function, and apply our reasonings to the calculation of the probable pecuniary loss. In order to do this, we have accepted the visual earning power as equivalent to the total earning power. We must next see if the visual act may be divided into factors, estimate the relation of these factors, and build up a working mathematical formula for this purpose. The objections to such reasoning, as applied to so-called organs of variable worth, pass away with the application of true scientific reasoning, for if we can accurately measure the various factors of vision, we may likewise apply our reasoning to their relation to their work and resultant remuneration therefrom.

First, and most important, of the visual factors is the central visual acuity; next in importance is the visual field; and next the

ocular motions. There are secondary factors comprised in the act of seeing that are physically of importance, which are the cerebral vision, the sense of light and color, and that of adaption. Accidental injury limited exclusively to any one of these factors is certainly not recognizable; for where such takes place, other portions of the visual act, especially the visual acuity, and the field are implicated. Therefore, we conclude the secondary functions when we treat of injuries to the three primary factors of vision.

These are not of equal value, the visual acuity being the most important, the visual field next, and the ocular musculature being of less importance. We have established a formula for the normal act of seeing, in which these factors have been given their relative valuations. In relating this to the earning ability, we have to add another factor of great importance, which is the ability to use the vision for gainful purposes, *i e.*, the ability to compete in the labor market. We consider this portion of our formula to be made up of the several factors of sight expressed in their mathematical relations, and have added this to our formula in such a way that an individual expression may be given to each case. This is a variable quantity, as it not only depends upon the ability to use the eyes in working, but upon the opinion of the employer as to the effect of the injury upon the amount of work he may expect to get out of the laborer.

It is well known that we can exactly estimate the visual acuity by the Snellen standard of test letters; that we can measure the visual field by the perimeter; and that we can value the amount of ocular muscle defect. But the act of vision and its relation to earning is of complicated nature. We cannot make exceedingly simple formulæ without doing damage to nature and to truth. The reasons for our opinions as to the relations between the visual factors and the ability to compete are too many and too long to enter into here. Suffice it to say, that we believe we have established a mathematical formula for the ocular earning ability which agrees very closely with results that have been obtained from examination of a large number of cases, especially those having ocular defects occurring from accidents. This mathematical expression is as simple as the complex act of seeing and of competing in the labor market will allow; and, when helped out by our mathematically exact tables and diagrams, is reduced to a simple example in multiplication that any educated person can readily and quickly calculate. For this portion of the subject, I refer to our work on "Visual Economics," and the various essays which have been published by the authors.

I refer briefly to the concrete example of loss of an eye upon the earning ability.

THE LOSS OF AN EYE THROUGH ACCIDENT.

Claims for damages in the case of accidental loss of an eye are of frequent occurrence.

While the clearness of sight is just as good in monocular vision as in binocular, and from the visual point of view, the one-eyed condition does not offer any obstacles for following a trade, this expression should be understood as only pertaining to the visual acuity and not to the other factors. Thus, if the injured person retain a visual acuity of 0.75 or 0.50 we should not immediately state that his working powers have or have not suffered, but should examine into the visual acquirements of his trade; but as a general rule, the resultant visual acuity may be regarded as economically normal or 1. A one-eyed man has lost 5-6 of the field, the action of the muscles would be materially impaired.

The factor of the ability to compete is decidedly important after the loss of one eye. This we estimate mathematically in our several books and essays upon the subject.

According to our calculations for trades with higher visual demands we find that a one-eyed person, after being cured of the ocular disease, has an impairment of the earning ability amounting to 30.9 per cent. for trades requiring higher degrees of vision for the first year after the accident, and after one year 21.9 per cent., while for vocations demanding less vision the values would be 27.3 per cent. and 18.3 per cent. Of course, it would be left to the management of the insurance companies as well as to the physician to change these proportions more or less according to the circumstances of the case.

Approximately we may say that a one-eyed person has lost 30 per cent. of his earning ability for the first year after the accident, and 20 per cent. afterwards for the higher class of trades, and for the lower class the proportion would be 27 per cent. for the first year and 18 per cent. thereafter.

Certainly there is a difference between the individual who has been employed in fine handiwork and one doing common manual labor, and justice demands that a difference should be made in judging the indemnity. The system hitherto in vogue in Germany was an unfair one, as it over-estimated the valuation for the loss of one eye: the Imperial Insurance Office, having first given 50 per cent. and later 33⅓ per cent. indemnity. Heddäus had fixed the indemnity at 50 per cent.; Groenouw accepts the sliding scale as made by Magnus, his values fluctuating between 20 per cent. and 30 per cent., and are therefore very close

to the indemnity proposed by Magnus; but all of these must be regarded as arbitrary estimations, and not the result of exact calculations as have been given in this essay and in our book. Examination of one-eyed persons in the iron and steel trades in certain districts in Germany showed that there was an actual impairment in the amount of work done and the wages earned of 26 per cent. at the highest. Examination of the Miners Association in Halle a. S. showed only 20 per cent. The examples met with in actual practice agree with the figures of Magnus.

ESTIMATION OF THE PECUNIARY LOSS TO THE INDIVIDUAL BY REASON OF VISUAL IMPERFECTIONS.

If we allow the foregoing, it stands to reason that we may express the loss to the earning ability both in percentage and in dollars and cents by calculating the prospective loss of wages to the working man. Now it remains to apply these ratings to the conditions met with in daily life.

Money being the world's medium of exchange and of valuing a man's work or time we must reduce the economic damage in each individual case to its value in dollars and cents or the monetary medium of the country in which the compensation for damage may be sought. It goes without saying that the value of men's time and wages differ greatly, not only in different trades and professions, but even in the various members of the same trade receive varying wages.

If we wish to exactly estimate the damage to the individual case, we must, therefore, figure with the compensation that the individual himself has been getting and his probable future earnings. It must be allowed that this may be done and that this estimate may be legitimately used as a basis with which to calculate the pecuniary loss he may sustain by reason of lessened working and earning ability. In the case of artisans and the working classes generally it might be considered strict justice to the defendant to take the average earnings of the class to which the plaintiff may belong as a basis upon which to figure the indemnity.

In dealing with money matters a number of other questions arise. Can we figure upon the probable duration of working life and consequent remuneration therefor? Upon such probabilities have there been established numerous industrial corporations—as the life, fire and accident insurance corporations—which have been so successfully managed from both the philanthropic and pecuniary standpoints.

In the case of an accident involving damage to the earning ability, the prospective loss is greater to a young man than to an old one, and this loss is dependent upon the age of the individual as well as the

amount of corporal damage. But little reflection shows us that an old man may have but a few years more of working life, for the competition of younger men and the natural infirmities of age and death, as well as the regard of rest in old age which comes to successful working or business men, will bring an end to his working life, even though he lives to the Biblical limit. We have, therefore, established an average age at which working life is supposed to cease. Therefore, in our calculations as regards probable pecuniary damage, not only the percentage of loss to the earning ability is calculated, but this is also applied to the probable future earnings of the workingman figured from the date of the accident to the probable termination of his working life.

We cannot figure upon the damages to ambition, to treasured hopes and plans, in calculating the economic damage: the probabilities of successful achievement are too small. The ambitions of our youths are so varied; thousands of young persons are doing, temporarily, more or less low grades of work, with the expectation of some day getting work of a higher class, which may be more remunerative. By far the greater number remain in the same station of life in which they started. There are thousands of young men whose ambition lies between that of President of the United States to the turnkey of some provincial jail. In our profession, it is the ambition of one man to be one of the foremost surgeons, while others have to be satisfied with practicing in some obscure village. We can only consider the facts that have existed before the accident and the station of life in which the working man may have been at that time. To this may be added the probable working life and percentage of damage to the earning ability for the calculation of the economic damage. The law, however, does not deal with this alone; it also allows damages depending somewhat upon precedent for pain and mental anguish, and upon philanthropic or primitive reasons, as well as upon evidence as to physical damages that may have been sustained. Therefore, even though we may scientifically establish the percentage of economic damage and express it in pecuniary terms, the other factors will no doubt be considered by the courts. We hold, however, that the economic damage should be the principal basis upon which claims should be allowed, modified by the importance of the other factors. As regards insurance companies, the amount allowed depends upon a business contract between the parties, as before shown.

In cases where the blame of the accident may be laid upon the second party, or where, through previous business agreement, an employer or insurance company has arranged to pay a fixed sum or a

pension in case of accidental injury, the amount of the indemnity should be in accordance to a definite schedule based upon the average wages earned in the vocations to which the individual may belong. It should be remembered that partial loss of vision not exceeding 25 per cent. in vocations having higher visual demands and not exceeding 50 per cent. in those with lower demands does not injure the earning ability to any degree. Indemnity for actual disability, therefore, should be granted only to those whose eyes are damaged beyond reparation to a greater extent than above named.

It is only in vocations that have visual requirements that a close estimate of these visual values may be made. In those classes of business life whose followers are not engaged in manual labor, whose business capacity relies more upon brains than upon actual handiwork, our rules cannot always apply, for even a blind man could work with monetary advantage in some trades and business; but for the laborer, for the artisan and for those professions in which the visual perceptive faculties are necessary, our rules and tables may be deemed fitting. By adjusting the age scale for the pecuniary earnings to the percentage of the actual damage as figured by the method of Magnus, we may arrive at an exact mathematical estimation of the economic damage in the individual for the loss of vision in any given case.

We have figured that a series of tables by which the earning power in dollars and cents for any period of life may be readily figured. For these details we must again refer to our book. Exceptions to this estimate must be made in the case of girls and women, since their working years are fewer and their increase of earnings does not follow the same rule as that of men; many, perhaps the majority, being employed in shops, mills and offices and in such positions that increase of skill and experience are not rewarded by increase of their income.

While by this method of reasoning we are enabled to exactly estimate the amount of money that a given case may reasonably expect to earn, provided he remain in the same business and exercise ordinary skill and diligence and hence accomplish an average amount of work, it must be admitted that such figures are hypothetical. However, such immense interests as those of the modern insurance companies and many other sociologic standards are successfully based upon the same principles and we must here be allowed to use them. The result to be achieved by all our computations is not the exact amount that a man may earn, but that which he may reasonably expect to receive for his labors.

We will now take up some specific examples to illustrate the ap-

plication of our methods for determining the amount of economic damage to the individual from ocular injuries.

Example 1. For our first example we take a case that often comes up in the courts of law. An artisan whose business has higher visual demands, who has previously had normal vision, receives an injury to one eye while working at his trade, by which the sight of the injured eye is wholly lost, the vision in the other remaining normal. The question then arises, what economic damage has this man sustained?

We have shown that in the higher class of trades, during the first year following the accident, a one-eyed person has lost 30 per cent. of his earning ability and afterwards the loss may be reckoned as 20 per cent. As a matter of convenience we will suppose that this man is injured at the 30th year of age, and that he has been earning for the previous five years $1,000.00 a year, with the expectation of earning this sum annually until he is 50 years of age, when for the next 15 years his average earnings, on account of disability due to age and the competition of younger workmen, will fall to $750 a year; his earning life to cease at 65 years. If he had not been injured the expective earnings for the balance of his life may be reckoned as follows: 20 years at $1,000 a year; 15 years at $750 a year; total, $31,250. For the first year after the accident, instead of earning $1,000, he may expect a loss of 30 per cent, ($300), for the following 19 years a loss of 20 per cent. ($200) annually, and the following 15 years 20 per cent. ($150) annually, making a total loss for the 35 years of working life of $6.350, which is his personal economic damage. If, however. this sum be discounted, it amounts to considerable less. This is a complicating financial factor. but as a matter of business equity a legal discount must be deducted from the probable economic loss as figured by our formula, in order to reckon the present worth. We may take 5 per cent. as an equitable discount rate for long business agreements such as this. After consulting with several financial authorities, we concluded that *true* rather than *bank* discount should be applied to the proposition and that the discount periods should be annually figured. The estimation of true discount in such a case is a simple, although rather lengthy, mathematical problem, consisting in finding the true discount rate for each year and adding up the total for the number of years involved in the example. In this case we find that the present worth of the above economic loss figured at $300 the first year, $200 the following 19 years, and $150 the following 15 years is $3,658.35, which is the sum that should be considered in the courts as an equitable amount for settlement of the personal economic damage. To this may be added the actual expenses and an arbitrary amount for the pain and suffering, as is allowed by the United States courts.

Example 2. If this man were injured at the age of 50, instead of his prospective compensation being $750 a year for 15 years, for the first year after the accident he would be earning 30 per cent. less, a loss of $225, and for the following 14 years 20 per cent. less, an annual loss of $150, making a total economic damage of $3,225, the present worth of which, discounted as above, is $1,718.51.

These sums should be used as the scientific basis for settlement of contested cases, either at law or in insurance, in the former the cases being modified according to American law by a reduction being made in favor of the defendant in case of extenuating circumstances or contributory negligence, and in additon made thereto for actual expenses incurred by the plaintiff during his illness and damages for pain and anguish suffered. The latter amounts must always be empirically estimated by the courts. In the case of annuities or pensions it is evident that the discount factor should not come into play and the actual yearly economic damage may here be properly allowed.

By the use of different rates of compensation and different years other examples could be readily given. The same method of reasoning applied to the loss of one eye in case of an artist or other professional man would yield proportional results. The only difference in the calculations would be the fact that such professions usually become more remunerative as the person grows older. In the case of the common laborer, the only difference would be the lower rate of compensation and the figuring of his economic loss at 20 per cent. for the first year after the accident and 18 per cent. thereafter.

It is to be noted that our rates of loss to the earning ability are less than those allowed by the courts for loss of one eye and to these are to be empirically added an amount for pain and anguish, etc., as well as reduced, or not allowed at all, if contributory negligence is shown.

If we can establish the foregoing, what would be the legal standing of the subject, and what should be the relation of the probable economic damage to pecuniary compensation for the results of accidents to the eyes? Such expression would not be established as a fact, but would be a matter of expert opinion and be considered as such in law.

We physicians are not only called into court to give evidence as to questions of fact, but also for our opinions upon probabilities. For instance, we may testify that a certain client has become totally blind, or that his visual acuity or visual field has been reduced to a certain amount; such a statement is accepted as a fact; but when we enter into the actual effect or probable result of the diminished vision upon the working or earning ability, there is always the question of personal opinion. If, however, by the acceptance of rules such as we give, a certain general opinion may be established, it will be accepted in the courts as the highest and best opinion obtainable, and will be almost as strong a statement as an actual fact, and due weight will be given to it in the instructions to the jury.

We are not living under a paternal government such as obtains in Germany, in France, and even in England, where every working man who may be injured is supposed to receive a certain compensation, depending upon the amount of damage to his earning powers. In America every case is more or less a law unto itself, the damage allowed depending upon precedent, the amount of pain and mental anguish, and upon philanthropic or punitive reasons, as well as upon evidence as to physical damages that may have been sustained. Therefore, even though we may scientifically establish the percentage of economic damage and express it in pecuniary terms, the other factors will no doubt be considered by the courts. *We hold, however, that the economic damage should be the basis upon which claims should be allowed, modified by the importance of the other factors.*

By reckoning these factors, we think we can estimate in a manner fair and just to all parties the amount of damage to the earning ability which may have occurred as a result of accidental injuries to the eyes and that this should be considered the principal factor in the settlement of legal claims.

RESUME.

1. The present usages for the estimation of pensions, insurance, and damages at law, for the injury to vision, are based wholly upon precedent and are purely empirical.

2. The relation of the visual act to the earning ability is susceptible of mathematic demonstration.

3. The probable loss of wages, *i. e.,* the effect on the earning ability of the individual, may be determined by the particular injury to vision.

4. (a) Insurance contracts will probably be continued under the present business arrangements, but could be equitably made subject to the amount of economic damage—a percentage of the sum for total disability being paid for partial losses. In the case of one eye the rates should be modified to between 18 per cent. and 30 per cent. of the total disability.

(b) For the settlement of pensions, the full economic damage should be annually paid.

(c) For the settlement of claims at law the probable economic damage should be estimated and considered the principle element, subject to business discount and to additions for the actual expenses subsequent to the accident and empirical amounts for the pain and anguish thereto incurred; contributory negligence and other legal factors being also considered in the verdict.

5. The calculations and rules of Magnus as modified by the author afford a method of estimating the amount of the probable economic damage in a manner fair and just to all parties and agreeable to all legal demands.

Discussion.

Dr. Walter Kempster, of Milwaukee: The paper of Dr. Würdemann is timely. The multiplication of mechanism increases the number of accidents liable to occur, and I presume there is not a physician in this room who has not been called upon to express an opinion as to the value of loss occurring to individuals who have been injured, or have lost some member.

There is one point to which I invite your attention. In the estimate to be made of losses to an individual, there should be taken into account one element which often follows as a direct result in no small proportion of cases, that is, the diseases liable to follow injuries to the eye. I have seen a number of such cases; in one an abscess of the brain followed. The original injury was a blow; symptoms of abscess appeared in about six months after the injury was received, but death did not occur until more than two years after the person had sustained the injury, and lost the eye; during his life he was able to do but little work.

In another case there was paralysis of the facial muscles following a blow, and loss of an eye; the paralysis did not occur immediately, but it prevented the individual from properly masticating, thereby injuring his health, reducing his strength and preventing him from performing his duties as he did before the injury was sustained.

Diseases following injuries are factors which should be considered by the physician before he gives an opinion upon the probable loss in earning capacity of an individual which results from injury.

In one other instance that came to my notice, there was an injury of the eye received in a railway accident; there was no direct proof sufficient to satisfy the court that the man had increased the injury in order to secure larger damages, yet there was little doubt that the man did something he ought not to have done, and as a result destroyed the sight, which was not destroyed by the accident. All these points should be considered carefully before expressing an opinion; all estimates for damages must depend on what is known as "Opinion Evidence," and at present there seems to be no other way of arriving at a fair conclusion, as Dr. Würdemann has so well said.

My experience in courts and with attorneys and juries, leads me to make one other remark, that is, as physicians we are apt to forget that the men to whom we are talking do not understand the technical language in which we are apt to describe injuries and diseases; technical terms are used as a matter of course. When speaking about the third nerve, or the first nerve, or the seventh nerve, or any other nerve, the judge, jury and lawyers are at a loss to know just what is meant. Use the English language, and express opinions clearly and fully, then there will be very little difficulty in getting a fair verdict from an average jury. They must rely upon our statements, and if they understand what is meant, they will generally reach a just conclusion.

Dr. G. E. Seaman, of Milwaukee: The paper of Dr. Würdemann is certainly an interesting one, and no doubt would be more so were there time to go into all the details, and I have no doubt that Dr. Würdemann has left out a great deal in the reading which would be of great value to hear. But practically all of these mathematical calculations are based upon the work which has been done in Germany, and they seem to have served the purpose very well in the matter of arriving at a correct estimation of the amount of damage; but even in Germany the tendency seems to be at the present time.

with the best authorities, to go back to earlier methods and take other matters into consideration. Mathematical formulæ upon which these conclusions have been based apply, however, better to conditions in such a country as Germany than they do to the United States, for the reason that when a man is born a laborer in Germany or born into a laborer's family, the chances are 999 out of 1,000 that he remains a laborer unless he emigrates; whereas, in the United States the son of a laborer, or a boy who begins life as a laborer may become the president of a railroad or the president of the United States—there is practically no limit to the possibilities.

Dr. Würdemann has said that all compensation may be regulated by the amount of economic damage. I do not believe that this is true, nor do I believe it will ever be accepted as a fact, for the reason that the amount of suffering always has and always will be taken into consideration by our courts, the loss of possible pleasures must be taken into consideration, the amount of disfigurement must be taken into consideration, and many other matters that cannot be determined by the application of these rules.

Neither can the physician alone determine the amount of damage, because if that were true then the physician must necessarily be a man who has a wider knowledge than any man possibly could have. For instance, a man working at a machine and doing a certain kind of work sustains a damage to one eye, or meets with the loss of that eye—it is not wholly the part of a physician to say whether or not he can continue his work and do his work as well with one eye as with two eyes; a man conversant with the work in hand would perhaps have just as valuable an opinion as a physician; so that in the estimation of damages it is necessary to take into consideration the station in life, the age, and the possibilities of the individual; and the courts always have done that and always will do it.

In the matter of the granting of pensions, Dr. Würdemann states that full economic damage should be granted. That is an utter impossibility, because if that were true and full economic damage granted in every case, the United States at the present time could not possibly pay the pensions that would be granted.

Dr. Würdemann: Estimation of economic damage should be founded upon the permanent amount of injury. As regards the physician in the court, positive statements as to probabilities should be made, and the expert witness should speak clear, plain English.

All cases in court have two factors which I have not touched upon greatly: Simulation by the patient and the sympathy of the jury. We cannot figure the possibilities of ambition and cherished hopes and plans.

In our work all the factors which Dr. Seaman spoke of are considered, and are covered in the paper. We claim that economic damage is the principal factor upon which claims at law should be allowed, taking into consideration, pain, anguish, etc., which have been heretofore and always will be allowed by the jury.

The United States pension office does allow full economic damage at present, based upon the *average* earning powers of the *average* man.

As to the question of the settlement of insurance, that is a business proposition between the man getting insured, who figures on how much he wants to get for certain injuries, which method of settling claims according to a number of replies I received from 52 insurance companies, would be considered.

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EDITORIAL COMMENT.

DR. M'CORMACK'S MESSAGE.

The physicians of this district who attended the last meeting of the Milwaukee County Medical Society—held to welcome and listen to an address by Dr. McCormack, the national organizer for the American Medical Association—must have been impressed with the man's force of character, his strong personality, and his conviction that his own effectual method of dealing with medical problems in Kentucky is applicable elsewhere. The keynote of his address, which concerned the betterment of physicians in their social, ethical and professional relations, lay in the one word—organization.

We are in hearty accord with Dr. M'Cormack in the principles he enunciated as to the function of county societies. Fundamentally,

the County Society is an organization which was created not with the essential aim of carrying on scientific work; its prime object is rather to gather into one large influential body all right-minded physicians. There should be no allopaths in this society, no homeopaths, on eclectics. It should be composed of physicians without creed distinction, hence of men whose ultimate aims are identical. Petty jealousies and animosities, a characteristic of most professions in which segregation is forced upon its members, should here be forgotten, for the common good stands uppermost. It should be this society's function to work out the problems that confront the physician, and by united action to so influence public opinion as to earn and demand a higher position in the community, and thereby enlist its sympathy in promoting favorable and necessary legislation.

Dr. M'Cormack expressed the conviction that it was not essential that the homeopaths and eclectics sever connection with their own societies before union with our county society is possible, and we ourselves have felt that the terms offered the homeopaths and eclectics of this state for capitulation were too unjustly severe. Adherence to a sect in medicine is, at best, like religion, largely an accident of birth. No, let the homeopaths and eclectics continue to segregate as such, and discuss scientific topics in their own way; but when the common welfare is concerned, when legislation and reforms are needed in which they are interested equally with us, then they belong to us, and their voices and votes should be with us.

Organization without creed distinction has given to the medical profession of Alabama and Kentucky a degree of strength not equalled in any other state. In Alabama the State Medical Society acts—through a committee—as the State Board of Health and Board of Medical Examiners; the County Society—through a committee—is the County Board. In Kentucky, there is a similar condition of affairs. And what is the result? There have been no quacks in Alabama since 1873, and Kentucky has enjoyed immunity from them for thirteen years. Favorable legislation was possible because its desirability was vouched for by every decent practitioner—therefore it succeeded; progress became possible because the need of improvement was manifest—therefore it too succeeded; the physician aspired to occupy the place in the world to which his vocation entitled him—because he deserved it—and it was accorded him.

If this was possible in Alabama in 1873, and in Kentucky in 1891, it is possible in Wisconsin NOW. The element of strength lies not so much in the State Society—for in this there are gathered men whose interests are in part diversified—as in the County Society, for

in this society all the physicians of a given locality meet for purposes of deliberation for the common weal, and here the problems that present themselves are to find solution.

In the course of his remarks on quackery, Dr. M'Cormack said: "The support of the church press constitutes the backbone of quackery in this country." While we do not concede this to be the case with reference to the itinerant quack, it does hold good in the case of most advertised medicines. The authoritative statement has come to us that many of the ministers whose names and pictures are scattered broadcast in laudation of alcohol-containing medicines, are subsidized in cash or kind for their testimonials. Many barrels of bad whisky are foisted upon the public, under the tonic label, by the recommendation of clergymen, who, from their ignorance of the immediate inspiriting effect of alcoholics, attribute the phenomenon to tonic rather than stimulating qualities.

To break this support Dr. M'Cormack suggested that frequent conferences be held with the clergy and press, with the aim of offering proof that our contention in the matter of quackery is not based upon sordid motives, nor upon a desire to possess what is not ours by courtesy of a recognition of fitness. This would help to clear the atmosphere of misunderstandings and misrepresentations, mitigate the evil of nasty advertisements, and aid decent and honest legislation.

Dr. M'Cormack's words of advice, seasoned with sound judgment, born of a ripe experience, must not fall upon barren soil. He has pointed out the way to success. If we are not blinded by our own arrogance, biased by a narrow horizon, held in bondage by illiberal orthodoxy, and do not feel ourselves tainted by the touch of the Gentiles, then must we too succeed. United and harmonized the medical profession will represent a potent force for its own advancement, for the public's good, and for the welfare of the race.

AERIAL INFECTION OF SMALL-POX.

The specific pathogenic microorganism causing variola has not yet been positively demonstrated. L. Pfeiffer's recently published investigations upon the etiologic factors of this disease, and the scientifically correct methods of his work, are so suggestive that some credence must be given his observations.

Pfeiffer claims as the specific organism causing variola and also vaccinia, a peculiar, sharply defined protozoan (amoeba). This para-

site, he states, is always found in the blood of persons suffering with the initial symptoms of variola, and also during the febrile stage of vaccinia. Its size is about one-quarter that of a red blood corpuscle, has a lashing flagellum and possesses decided motility. However, before accepting his theory as final, we need further and positive confirmation.

To this uncertainty of the real factor in the transmission of variola is due the difference of opinion among authorities as to the probability of aerial convection of this disease.

A recent editorial in the *Boston Medical & Surgical Journal* quotes an article in the *Journal of Hygiene* by Dr. J. Galister, of England, who, after a careful consideration of all the factors for and against this doctrine, sums up as follows: "The conclusion at which I have arrived from this critical study of smallpox epidemics with regard to the doctrine of aerial conversion, is that the doctrine has not been proved; that in some of the epidemics, the conclusion as to aerial evidence is blighted by the want of distinction between the hospital as a direct and indirect source of infection of those resident outside its walls, and that in others the doctrine has been suggested from the flimsiest evidence.

To my mind as indicative of proof against the doctrine, there are the different histories and experiences of institutional populations placed within the range of aerial influence, if it existed, which cumulatively compel me to say that no such aerial dissemination seemed to have existed."

Observations made by Dr. Barry, Inspector of the local Government Board of England, at Sheffield Hospital, and by Dr. Evans at Bradford, England, incline these gentlemen to oppose the views taken by Dr. Glaister. Dr. Barry found that in taking the successive distances from the Sheffield Hospital, the following percentage of houses were infected with variola:

From 0—1000 ft.	1.75%
From 1000—2000 ft.	0.50%
From 2000—3000 ft.	0.14%
From 3000—4000 ft.	0.05%
Over 4000 ft.	0.02%

In the experiments made by Dr. Evans at Bradford the area surrounding the hospital was divided into quadrants for a distance of one mile, which enabled him to study what effect, if any, prevailing winds would exert upon the distribution of this disease. During the time of his observations—one year—westerly winds prevailed during 250 days and easterly winds 83 days. The percentage of infected houses during this time was as follows:

In the North-East Quadrant.....7.06%
In the North-West Quadrant.....2.40%
In the South-East Quadrant.....5.28%
In the South-West Quadrant.....2.93%

These experiments seem even more suggestive than Dr. Barry's.

Our own experience with the Isolation Hospital of Milwaukee would seem to bear out Dr. Glaister's theory.

In the last five years smallpox has been prevalent here more or less continuously. During this period 960 cases were treated at the City Isolation Hospital, corner 18th and Mitchell Streets. At times as many as thirty to forty cases were confined there at one time. During the summer months, when weather permitted, the windows of the different wards (properly screened) were always open, thus favoring, if possible, aerial infection; however, during the entire period of five years not a single case of variola developed within a radius of one-half mile of the hospital, although the surrounding locality is fairly thickly populated. The large number of cases that occurred in close proximity to the hospital during the great epidemic of 1894 was due not so much to aerial convection and infection, as to the fact that a riot existed at that time, mobs frequently following the ambulance to the hospital in their endeavor to recover the patients who were being transported. To these direct exposures (which were daily occurrences) and to the undoubted leakages that existed at the hospital itself, was due the large number of cases that developed.

It may be well in this connection to call attention to one important factor in the spread of transmissible diseases that is likely to be greatly underestimated in its power to do harm, *viz.:* our common house fly. In the Spanish-American war it was proven beyond a doubt that the fly was the carrier of the typhoid germ among our soldiers. Why should it not be possible for a fly to carry the contagium of variola from one house to another, and would this not be likely to mislead into a belief of aerial infection?

As long as the specific organism causing variola has not been positively demonstrated, the subject of aerial infection is bound to remain a debatable question. Our experience with the Isolation Hospital in Milwaukee disposes us to side with Glaister in opposition to the aerial convection theory.

THE OTTAWA TENT COLONY FOR THE TREATMENT OF TUBERCULOSIS.

For the benefit of those of our readers who may be interested in learning what tent life will do for the tubercular patient, we have

subjoined a brief statement pertaining to the Ottawa Tent Colony, recently established in Illinois.

The profession of Illinois, without regard to school of practice, has united in a crusade to stamp out tuberculosis in that state. The primary object of this movement is for the prevention of the disease, but in order to accomplish this, it is recognized that those now suffering from the disease must be provided for, not alone with a view to curing them but to protect the general public from the contagion that inevitably follows in the wake of the uncontrolled tubercular patient.

To this end the medical men of the state have encouraged the establishment of a sanatorium at Ottawa, under the direction of Dr. W. J. Pettit, of that city, who is chairman of the Committee on Tuberculosis for the Illinois State Medical Society.

The success thus far attained in the Ottawa Tent Colony has demonstrated beyond all doubt that tuberculosis can be cured in Illinois quite as easily and successfully as anywhere else. The Tent Colony was opened on July 1, with two patients. The number now under treatment is thirty. Nearly all patients admitted, who were not in an advanced stage of the disease, have been materially benefited, and several have already been discharged as convalescent.

The treatment consists in out of door life, a carefully selected diet, regulation of exercise, and medication for the improvement of nutrition. Each patient is expected to take not less than three quarts of milk and six raw eggs a day, in addition to the regular meals.

The results of tent life may be thus briefly summarized: The appetite increases; nutrition improves; cough decreases; night sweats cease; sleep improves, and the pulse rate is reduced. A marked improvement has been observed in all stages of the disease, but in early cases the results are the most satisfactory. The patients are for the most part cheerful and contented with their surroundings. As a rule they accept uncomplainingly the primitive life which the treatment imposes. The greatest difficulty experienced is to hold some of them long enough to make the improvement permanent.

The Colony will be continued throughout the Winter. Patients whose condition makes it desirable to live in tents will be recommended to do so. Those who should not or will not, will be comfortably housed. A tent is intended simply as a sleeping apartment. Tent life as carried out for the treatment of tuberculosis soon becomes thoroughly enjoyable. Before beginning such a life, patients almost invariably entertain exaggerated ideas of its dangers and inconven-

iences. A short trial soon dispels this fear, and they are with difficulty induced to return to an indoor life. It should be understood, however, that during the winter, patients are given their choice, and those who object to living in a tent are comfortably housed in such a manner as will comply with the essential principles of the present day treatment. Experience teaches that the results are even better in winter than in summer.

The tuberculous patient when well fed and warmly clad feels the exhilarating effects of cold weather quite as much as the normal individual, but will not avail himself of these valuable aids in the restoration of health unless under careful supervision.

The Ottawa Tent Colony is a much needed and laudable undertaking, and deserves the encouragement and support of the entire medical profession, without regard to school of practice. Dr. Pettit extend a cordial invitation to physicians to visit his institution and see for themselves the good work that is being done.

ANTI-TYPHOID INOCULATION.

Judging from recent reports it would seem as if our therapeutic armamentarium is to be enlarged with a successful serum for the prevention and treatment of typhoid fever. Prof. Chantemesse, of Paris, has recently announced the results of a serum obtained from horses inoculated with typhoid toxins. He has treated 545 cases of typhoid fever with a mortality of less than 4 per cent., while the mortality of other hospital cases in Paris during the same period of years was 18 per cent.

We read in the Medical News (Nov. 12, 1904) of a serum prepared by Prof. A. E. Wright. The success of his serum has been acknowledged by a commission appointed for the purpose of investigating his claim. Eight years ago Prof. Wright announced that he had succeeded in preparing a serum which, when inoculated, immunized individuals to typhoid fever. He demonstrated its success by inoculating several thousand soldiers in India, and later, during the South African war, inoculated for purposes of immunization, 100,000 men. The commission appointed to investigate reported "that not only is a lessened susceptibility to the disease brought about as a result of inoculation, but the case mortality is largely reduced." The Army Council has adopted a recommendation that the anti-typhoid inoculation be resumed in the army.

We look forward with much interest to the resumption of this work.

HENRY MUNSON LYMAN, A. M., M. D.

In the recent death of Dr. Henry M. Lyman the medical profession of Chicago has lost one of its most dignified, erudite, skillful and genial members. Dr. Lyman was one of those men whom it is a pleasure to have known, whose example was wholesome for both young and old.

The writer knew him best as a teacher more than a generation ago. He was one of those men who showed at all times a desire to advance the best interests of the medical profession, and being anxious to do his part was willing to teach in any department open to him. Thus he became professor of chemistry in Rush Medical College at a time when he was already paying much attention to diseases of the nervous system. He frequently surprised and delighted the students by appearing for a colleague at the college and lecturing on the regular subject then before the class in that department. It was no uncommon thing for the doctor to address his classes on odd evenings on subjects other than those strictly medical, that is, on astronomical, biological and geological subjects. As an after-dinner speaker he could always be relied upon to both entertain and instruct.

Dr. Lyman was not a voluminous contributor to medical literature, but his books on Anesthesia, Disorders of Sleep, and Practice of Medicine, served to increase his general reputation as a man of more than ordinary ability. As professor of medicine in Rush Medical College he has left an impress upon the practitioners of the Northwest which will endure for another generation.

The State Conference of Charities of Illinois, adopted resolutions at its recent meeting recommending the establishment of an Epileptic Colony, and favoring the disinfection of all buildings in which deaths from consumption have occurred.

The Milwaukee City Council has passed an ordinance for the issuance of $50,000 bonds for the building of a new hospital for contagious diseases.

The Staff of Cook County Hospital, Chicago, has been put under civil service rules and hold a competitive examination for places. Upon the application of a number of interested physicians, Judge Dunne has issued an injunction restraining the County Board from carrying out the plan, on the ground that the Board had exceeded its authority. The Board has rescinded its action.

The Chicago Medical Society has under consideration the following amendment to the constitution, offered by Dr. Bevan: "Any member who is guilty of entering into any arrangement for division of a fee for professional services, which arrangement is not known by and fully understood by the patient or party by whom the fee is paid, shall be guilty of unprofessional conduct."

THE STATE MEDICAL SOCIETY OF WISCONSIN.

ORGANIZED 1841.

Officers for 1904-1905.

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I. A. L. BRADFIELD, La Crosse, 1st Vice-President.

GILBERT E. SEAMAN, Milwaukee, 2nd Vice-President.

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FOR ONE YEAR.

1st Dist. H. B. Sears, - - Beaver Dam
2nd Dist., J. G. Meachem, - - Racine

FOR TWO YEARS.

3rd Dist., F. T. Nye, - - - Beloit
4th Dist., E. S. Hooper, - - Darlington

FOR THREE YEARS.

5th Dist., J. F. Pritchard, - - Manitowoc
6th Dist., J. S. Walbridge, - - Berlin

FOR FOUR YEARS.

7th Dist., W. T. Sarles, - - - Sparta
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FOR FIVE YEARS.

9th Dist., D. L. Sauerhering, - Wausau
10th Dist., E. L. Boothby, - - Hammond

FOR SIX YEARS.

11th Dist., J. M. Dodd, - - Ashland
12th Dist., A. T. Holbrook, - - Milwaukee

Next Annual Session, La Crosse, June, 1905.

The Wisconsin Medical Journal, Official Organ.

SOCIETY PROCEEDINGS.

THE COUNTY SOCIETIES—AGAIN.

It is now about six months before the Annual Meeting of the State Society, and but three months before the annual report of the County Secretaries will be due. If we shall come to the State meeting with full ranks—a complete organization, and an increased membership, there is urgent need at once of much faithful and unselfish missionary work all over the State. The National Organizer, Dr. J. N. M'Cormack, of Bowling Green, Ky., has just completed his circuit of the State, and has held meetings in every Councilor District but one. Hhe greatly regretted that an urgent telegram from his home prevented his meeting the brethren of the Fourth District. He reports that the meetings were in the main well attended, enthusiastic and most enjoyable. He was sorry that he could not meet a larger number of the physicians personally—and especially those who greatly need to be brought into the light. There can be no question about the benefit we shall all derive from his direct stimulating addresses and his inspiring personality. He is certainly admirably equipped in all ways for just this particular work, and if someone of like spirit

and wisdom could go into each county and do personal missionary work there, much more good could be accomplished. While, in many of the counties, he found well organized societies, doing excellent work, he feared that others existed largely on paper, and lacked the vitality and usefulness which come of a live, working organization. In these coming months much serious and painstaking work should be done by those "Medical Bishops," the Councilors, in strengthening and perfecting these weak members of our corporate body, and of their diocese. This, in the nature of things, must needs be largely personal. It is necessary to go out and convert those who still fail to appreciate the great benefit which cannot fail to come to one and all from medical organization and united action, as worked out in the county society. The "Medical Society Spirit" must be cultivated. Let the slogan be, "Every good man for the County Society, and the County Society for every good man."

The theme of Dr. M'Cormack was "get together"—not only for the honor and upbuilding of the whole profession, but for our individual interests as well. In county districts no one can help a physician, in a thousand ways, so much as a neighboring fellow-physician. In place of a personal hostility and a bitter rivalry, as often exist, a friendly co-operation would benefit the public as well as each other. In our larger towns nothing has tended so much to discredit our calling and produce distrust in the public mind as the disgraceful jealousies and quarreling in our own ranks. "In no profession is there so much need of fraternal and mutual respect among its members as in the medical profession, and yet in no one of the higher professions is there, or at least has there been, so little of this feeling. The condition essential to a better feeling among physicians is fellowship. Fellowship begets friendship and destroys jealousy. The first step toward fellowship is membership in the same societies."

The County Society, then, should be a rallying place where such a gospel is preached and exemplified. The meetings should be made so interesting and instructive, the spirit of good-fellowship and mutual helpfulness must be so manifest, that no one shall feel that he can afford to miss the great and unquestioned good to be derived from such an organization. It is best to have but few papers and plan for thorough and well considered discussions, with every man so appointed on hand—without fail—to do his best. Make the social features prominent and attractive. "Breaking bread" together is a symbol—and a great aid—of comity and friendship. Don't hesitate to call for help if you need it. One, at least, of the Councilors has so arranged the meetings in his district that he will be present in the

coming sessions of each of the seven county societies under his charge, to aid in rounding up the stragglers and to infuse new enthusiasm into the work. It would be well if all the Councilors would follow his example. Much can be accomplished by personal letters and interviews, and be sure to send a program of each meeting to every eligible member of the profession in the county.

The matter of prompt and systematic collection of annual dues is all important. It is necessary to make this annual payment of $2.00 an absolute essential to standing in the State Society. Consequently, only those who have paid their dues before the 10th of April in each year—and so reported to the state secretary—will be considered as members of their county societies. Last year there was much unavoidable confusion and misunderstanding as to the financial obligations, but this year everything is plain and there are the same conditions for all. It will be well if the county secretaries begin their work in good season—collecting as much as possible at the annual meeting in December. New members coming in during the year should be reported—with their dues—at once to the state secretary, that they may receive the official organ of the state society—The Wisconsin Medical Journal—and be eligible to membership in the American Medical Association.

A matter of interest and importance to the profession is the fact that the National Society is soon to publish a Directory of all the physicians belonging to the various state societies and their component branches—now numbering some 46,000. The first part will contain the directory of each State, the names being arranged alphabetically under post offices. The college, year of graduation and date of license or registration, will be given, and the component society to which the individual belongs will be indicated. The second part will be arranged alphabetically by names, and will cover the whole country. The book will also contain other matters of much interest to physicians. The advantages to the members of such a directory of the cream of the profession is obvious, and only those in good standing in their various societies will be included. In furtherance of this plan it will be necessary for the county secretaries to correct and complete their county "Card-Index" to date, and to send to the state secretary the personal record blanks of all members which have not been already sent in. If out of blanks please send for more at once. Also, if any county has no card-index outfit, or is in need of card-index material, the want will be promptly supplied on application.

The membership of the 62 affiliated societies was reported at the last Annual Meeting of the State Society as 1,311. At that time it

was resolved by the House of Delegates that our next muster roll should contain at least 1,500 names. Let us not be content with any less, but let us make it more if possible. Out of the 2,600 physicians of the State we should ultimately claim at least 2,000. With united effort and with plenty or faithful work by those who have the cause at heart, we may confidently look forward to such success.

C. S. S.

MEDICAL SOCIETY OF MILWAUKEE COUNTY.

Meeting of November 16.

The meeting was devoted to the reception of Dr. J. N. M'Cormack, the national organizer of the A. M. A. Over 100 members and guests were in attendance. Several members of county societies in the First Councilor District, including Dr. H. B. Sears, councilor of that district, and Dr. G. A. Heidner, Secretary of the Washington County Society, were present as representatives of that district.

Dr. M'Cormack addressed the meeting for over two hours, holding the close attention of his audience throughout. His talk was full of interest and appealed, in its truthfulness, to every man present.

His theme was the deplorable want of concord within the ranks of the medical profession and the logical results thereof. He used general terms and described conditions as he found them throughout the country, but he was evidently willing that any of his statements that applied to local conditions should be so applied.

An epitome of his remarks is as follows: The medical profession, since its earliest history as a vocation, has been made up of segregated individuals who have believed, or at any rate acted as if they believed, that the success of each was to be built up on the blasted reputations of others. Since no one in the vicious circle of derision and calumny was exempt, it has been natural, and is to-day, that laymen should hold the entire profession in the same estimation in which they know certain of its members hold others. In small communities it is found that jealousy and consequent back-biting, exists between individuals; in cities it exists largely between cliques, which are maintained by local medical colleges or other imaginarily rival interests.

The medical profession, however, is not the only class so afflicted by internal dissentions, but it is the last to realize its condition and to seek for the cause. Ministers, engineers, architects, in fact, members of all vocations in which work is necessarily done by individuals working alone, have defeated the object of their best endeavors by lack of appreciation of community of interest.

The results of lack of co-operative effort by the profession are many. The individual doctor suffers in ways only too well appreciated by himself. The public suffers, though not to the same extent, through lack of proper medical legislation, which has always aimed to be conservative of the public health and has never been advocated through selfish motive. For it is ever characteristic of our profession that it takes better care of its charge, the public, than of itself.

The remedy for unsatisfactory conditions, then, is to be sought for. Since segregation is the cause, aggregation should be the cure. And the County Society is offered as the panacea. It should be an organization broad enough to take in every man within its jurisdiction who is respectable,—or even shows symptoms of becoming reputable; it should, by bringing its members into more intimate contact, let each see that his fellow is worthy of some respect; it should, by demanding respectability of each individual, raise up the "submerged tenth" in the profession, realizing after all that the profession already assumes responsibility for every man who is legally entitled to practice; it should blot out sectarianism in medicine by demanding that every legally qualified practitioner should be a doctor, and not a doctor of this or that, knowing that with the co-operation of other county societies in the state it has the power to determine what a legally qualified practitioner shall be. With a united front it could accomplish needed legislation with comparative ease, do away with quackery, regulate medical advertisements, stop the sale of harmful patent medicines, and in many other ways bring about results for the benefit of the public and of its own members. In Alabama, organization has already accomplished much. The Reorganization Committee of the A. M. A. found little to do in that state. It found that 97 per cent. of the medical profession were members of the county societies, and through them of the state society; that there had been no advertising quacks in the state since 1873; that there was no sectarianism in the profession; that the State Board of Health was a committee of the State Medical Society; and that the profession had the respect of the citizenship of that state.

Dr. M'Cormack called for discussion, which was generally participated in and brought out evidences of needed reforms in this county.

After the discussion, which lasted until after eleven o'clock, refreshments were served. A. W. GRAY, *Secretary.*

FOND DU LAC COUNTY MEDICAL SOCIETY.

The second annual meeting of the Fond du Lac County Medical Society was held Nov. 14, in the Council Room at Fond du Lac. Dr. McNeil gave the annual presidential address, taking as his subject "Phthisis."

The election of officers for the ensuing year resulted as follows: President, Dr. George V. Mears; Vice-President, Dr. Frank S. Wiley; Secretary and Treasurer, Dr. Flora A. Read; Censor for three years, Dr. J. P. Connell; Alternate Delegate, Dr. Guy C. Bowe.

FLORA A. READ, M. D., *Secretary.*

REGULAR MEETING OF THE MILWAUKEE MEDICAL SOCIETY.

November 22, 1904.

Dr. F. D. Brooks presented a paper on "The Medical Treatment of Infection of the Biliary Passages." Dr. Brooks reviewed the cause, etiology, and symptomatology of infection of the gall bladder, and raised the question as to whether it was not possible to disinfect the gall bladder as readily as the urinary tract. He reported a case in which the course was very severe, and

in which operation was refused. Diagnosis was originally of appendicitis, with a mental reservation. Three days after first attack diagnosis was changed to suppuration of the biliary passages. In addition to the incidental medication and ice bag over the region of the gall bladder, the salicylates were exhibited in line with the evidence of Kuhn that the salicylates do disinfect the bile.

Discussion: Dr. Patek reported a similar case in which he believed the symptoms to have been as severe, but in which the patient recovered without specific bactericidal treatment. Upon the patient's own initiative, olive oil in increasing doses was taken, with a prompt cessation of the infective process, and with complete freedom from attacks since. Dr. Patek doubts whether the treatment used in Dr. Brooks' case had a specific bactericidal action.

Dr. Washburn believes that the only action the salicylates have in this condition is as a cholagogue. Where pus is present surgical treatment should be inaugurated and drainage established. As for the application of ice, Dr. Washburn marvels that so many patients survive this method of treatment in inflammation. He drew an analogy between the use of ice and the old time blood-letting, stating that the patient who survives, does so in spite of the disease and of the treatment. He made an exception in the treatment of ophthalmia neonatorum, in which he believes the ice treatment to be of value.

Dr. P. Jobse believes that this class of cases should be treated by surgical methods.

Dr. Wingate asked that Dr. Washburn be asked to explain more fully his views upon the application of ice in inflammatory conditions.

Dr. Beffel concurred with the writer of the paper and drew an analogy between the medical treatment of infection of the biliary passages and successful medical treatment in pyelitis. He believes that many of the diseases now considered surgical will ultimately come into the domain of the internist.

Dr. Myers objected to the analogy between an infection of the biliary passages and pyelitis, holding that in the former there is not a constant drainage and flushing of a gall bladder whose passage is so likely to be occluded. He is willing to grant that in a low grade inflammation of the liver tissue itself much might be accomplished by the use of salicylates.

Dr. Baer, answering Dr. Washburn's criticism of the use of ice, said that we know that cold acts primarily as an irritant, causing an active hyperaemia which we know to be indicated in combatting an infective process.

Dr. Barth, agreeing with Dr. Myers, stated that an infection of the gall bladder could not be likened to an infection of the ampulla of the kidney. One of the first results of an inflammation of the gall bladder is often an occlusion of the duct, making the bladder a closed sack, filled with pus. A truer analogy might be drawn between the gall bladder and the appendix; where there is an encysted collection of pus, drainage should be instituted at once.

Dr. Fiedler questioned the statement that the salicylates had a germicidal action, and further, whether they even stimulated the flow of bile.

Dr. Washburn, in replying to objections made to his statement that the common use of ice was injurious, said that it was not the employment of

ice itself that he objected to, but to the common method of its use. He concurred in the opinion of Dr. Baer as to the beneficial effect of hyperaemia induction, and stated that it is for this reason that he made the statement which had excited so much discussion. The ice bag is left so long in place that the hyperaemia is replaced by anaemia, which is contra-indicated.

Dr. Brooks, in closing, stated that ice relieves pain, contracts the vessels and inhibits the growth of bacteria. He agrees that a gall bladder, shut off by an impacted stone, will not be improved by medical treatment, but believes this condition to be but a small proportion of the infected gall bladders. He repeated a statement made in his paper, that the experiments of Kuhn clearly demonstrated that the salicylates have a germicidal action used in this connection.

Dr. Arthur J. Patek demonstrated several interesting specimens. A rather unusual case was a papillomatous carcinoma of the stomach with numerous secondary deposits in the stomach wall. This tumor had apparently given rise to very few symptoms, the patient having died of an acute lobar pneumonia. This same case presented kidneys that were almost completely transformed into cysts, the result of prostatic hypertrophy and hydronephrosis. Another specimen was a prolapsed bowel, the result of a neglected inguinal colostomy. The patient from whom this was taken was a follower of Elijah Dowie and refused medical attention after the colostomy for rectal carcinoma had been performed.

HOYT E. DEARHOLT, *Secretary.*

GRANT COUNTY MEDICAL SOCIETY.

At the second annual meeting of the society, held early in December, the following officers were elected: President, Dr. L. G. Armstrong, Boscobel; Vice-President, Dr. Wilson Cunningham, Platteville; Secretary and Treasurer, Dr. Mina B. Glasier, Bloomington; Delegate, Dr. P. L. Scanlan, Lancaster; Censor, Dr. C. A. Cooper, Montfort.

An amendment reducing the number required for a quorum was adopted. Drs. Jason B. Hitchcock, Montfort; Orlando P. Sala, Bloomington, and W. W. Pretts, Platteville, were admitted to membership.

An excellent paper was presented by Dr. J. E. Metcalf on "The Ethical Side of the Profession."

The meeting closed with a banquet which was much enjoyed by the members and their wives who were present. P. L. SCANLAN, M. D., *Secretary.*

IRON COUNTY MEDICAL SOCIETY.

The Iron County Medical Society held its annual meeting on Dec. 6, and elected the following officers for the coming year: President, Dr. A. Uren; Vice-President, Dr. D. Lando; Secretary and Treasurer, Dr. T. J. Hambley; Censor, Dr. J. Urquhart; Delegate, Dr. J. Urquhart.

No formal papers were read, but an informal and instructive talk was given by the retiring president, Dr. J. Urquhart, on "Puerperal Infection."

Dr. Lando, the district secretary, called the attention of the members to the necessity for keeping their dues paid promptly and asked for an improvement in this direction. T. J. HAMBLEY, M. D., *Secretary.*

JUNEAU COUNTY MEDICAL SOCIETY.

The annual meeting of the Juneau County Medical Society was held at Mauston, Dec. 6, 1904. The attendance was rather small. The following program was presented:

"The Commoner Diseases of the Heart," Dr. E. H. Townsend, New Lisbon.

"Graft and Irregularities in the Practice of Medicine," Dr. C. S. Smith, Elroy.

Annual Address of President, Dr. J. B. Edwards, Mauston.

A thorough discussion of the various subjects presented followed, and the meeting proved to be a very interesting and profitable one.

The following officers were elected for the ensuing year: President, Dr. J. B. Edwards, Mauston; Vice-President, Dr. F. T. Field, Elroy; Secretary and Treasurer, Dr. A. T. Gregory, Elroy; Censor, Dr. C. C. Vogel, Elroy. A County Committee on Public Health and Legislation was appointed, composed of Drs. E. H. Townsend, C. S. Smith, and F. T. Field.

The next meeting of the society will be held at New Lisbon, the date to be decided later. A. T. GREGORY, M. D., *Secretary.*

CURRENT LITERATURE.

Venous Hyperemia.—HABS (*Münch. Med. Wochenschrift*, June 2d, 1903) gives a resumé of Bier's methods of hyperemia production from their beginning, and then describes Bier's present procedure as follows: An elastic or flannel bandage is applied over a cotton or flannel pad proximal to the joint to be treated, sufficiently firm to stop the venous but not the arterial flow. This bandage should be wide and the site of its application frequently changed to avoid producing pressure atrophy of the soft structures underneath. This is allowed to remain in situ for varying periods of time depending on the conditions present.

With slight modification of the above method, venous hyperemia was used in 300 cases in the Magdeburger Krankenanstalt Sudenburg, 200 of which were tubercular. Many cases of chronic inflammation of the knee, wrist and ankle (tubercular) healed absolutely. The joints under treatment became painless, fluctuations became hard, then softened, and finally disappeared. Especially was this so in "closed" cases. Quite a number of cases, however, in which improvement was apparent at first, became worse with the continuation of treatment; abscesses and effusions formed, fever developed and operative interference was rendered necessary. Open cases showed poorer results, very few of these being benefited. Where sequestrae were present, or where the bone was badly diseased, operation was done at once.

From the 200 cases H. concludes that Bier's method should be given a trial in all closed cases, but when sinuses develop, the joint should be submitted to operation at once.

The author has formulated the following rules of treatment based upon his own experience:

1st. In tuberculosis, the bandage should be applied twice daily for the first eight days for a period of from four to five hours, which time is to be gradually reduced to one hour per day until a cure results. Active hyperemia should not be used, but the passive can be well combined with iodoform injections especially when closed abscesses or effusions into the joint are present. Large abscesses are to be drained and fistulæ curetted. Advanced cases should be operated.

2d. In gonorrheal arthritis, passive hyperemia should be used at once, the bandage being left on 8 to 12 hours per day. After the fever and pain have subsided active hyperemia should be used one hour every third day, the passive being continued for resorption of joint effusions.

3d. In chronic stiffness of a joint (following trauma or inflammation) massage and medico-mechanics, passive hyperemia twice daily for one hour and every third day one hour of active hyperemia.

4th. In chronic rheumatic inflammation of a joint, preferably active hyperemia by means of the electric light bath or hot air chamber once or twice daily for one hour; also passive.

5th. In deficient callous formation, passive hyperemia two hours daily combined with massage and stimulation.

6th. In frost-bite of the first and second degrees, the blebs and abscesses are to be treated surgically and then passive hyperemia employed one to two hours twice daily. The author advises that the usual medical measures be carried on in conjunction with both active and passive hyperemia.

Heule (*Zentralblatt f. Chir.*, Apr. 2, 1904) fully endorses Bier's work in an article entitled "The Technique of Venous Hyperemia Production," but endeavors to obviate the difficulties attendant upon Bier's method by an apparatus of his own which he describes and illustrates. It consists of a rubber tube with an air valve, which is clamped about the part over a pad of cotton. This is connected with a double atomizer bulb and a Riva-Rocci sphygomomanometer by means of a glass T-tube. The height of the mercury in the sphygmomanometer indicates the amount of pressure necessary to produce the desired degree of hyperemia. In subsequent treatment of the same patient, the pressure can be raised to this point immediately, thus obviating much loss of time.

Bier (*Münch. Med. Wochenschrift*, Feb. 9th, 1904) describes and illustrates some improvements in his suction apparatus for the production of hyperemia. These consist in the use of glass cylinders modeled according to the shape of the limbs which are to be treated.

Luxembourg, in an article in the *Münch. Med. Wochenschrift*, March 8th, 1904, gives the results in fifty cases treated by Bier's method, during the previous year. In some of the cases active hyperemia, by Bier's hot air apparatus, was used, but in the majority, passive congestion was promoted by means of the rubber bandage. At first the bandage was allowed to remain in place, but later the Tillmann-Greifswald method, twice daily for one hour, was followed. Good results were obtained in tuberculous cases, recent

or advanced, with sinuses and without. Bier's observations on joints which were undergoing resolution were fully sustained. In 23 cases of joint tuberculosis, 7 were fully cured, 8 were materially improved and in 7, still under treatment, the progress of the disease was quickly arrested. One case was uninfluenced. In none were complications or regression noticed, such as at times were seen by Bier. This he attributes to the fact that in no case was hyperemia prolonged more than one hour twice daily.

L. also uses this method in gonorrheal joint inflammations both acute and chronic, often in conjunction with Bier's hot air apparatus and early massage, with good results. In the 8 observed cases, 2 were fully cured, 3 greatly improved, and 2 showed no result. One still under treatment shows steady improvement. Five cases of chronic joint stiffness due to chronic arthritis, intra-articular fractures or long continued immobilization were treated, and L. was well satisfied with the results obtained. The pain rapidly diminished, though motion was not much improved. (G. P. Barth.)

Christian Science. The best and most accurate description of the works of "Christian Science" in a few words, that we have observed, comes from the pen of the late Thomson Jay Hudson, in his book entitled "*The Evolution of the Soul.*" Of the principal book of Mrs. Eddy he says: "Its only legitimate place is in the library of the alienist. Its author is a psychic, and the book is purely and simply a psychical phenomenon. As such it deserves serious consideration, for it stands unique as an illustration, on an extensive scale, of the vagaries of psychical 'mentation' when the subjective mind of the patient is dominated by false suggestion ,and reason is in abeyance."

He also calls attention to the following, which should be of interest to all physicians, and which we fear is too true: "The only justification for discussing the subject outside the journals of psychiatry, consists in the facts that the sect has gathered its forces from all ranks of society ,that it numbers its followers by hundreds of thousands, and that its delusions threaten to become epidemic and to fill our insane asylums. Not that all who call themselves 'Christian Scientists' are either mattoids or paranoiacs, or that they are all in imminent danger of losing their mental balance; those charges are obviously the gross exaggerations of sectarian prejudice or of professional jealousy. On the contrary, there are vast numbers who are rated as 'Christian Scientists' who know little of, and care less for, the theories of the founder; and therein lies their safety. It is only those who undertake seriously to master the theory and to harmonize it with the facts of experience that are in imminent danger of mental alienation, and even they may escape the serious phases of paranoia if they have not acquired, or are not congenitally afflicted with, a neuro-psychopathic tendency. Unfortunately this tendency is alarmingly prevalent in modern society of all grades, as the records of the lunatic asylums testify, to say nothing of the numerous comparatively harmless mattoids who are still allowed to run at large."

(U. O. B. Wingate.)

Corneal Edema after Instrumental Delivery—Fejer, J., Budapest, (*Centralbl. fuer Augenh.*, 1904). Under normal conditions the eye of the child is not exposed to injuries during labor, although some cases of severe

injuries have been reported. Mostly, however, they are produced by operations with the forceps (in narrow pelves), and may consist in fractures of the skull, injuries to the eyelids, total evulsion of the globe, paralysis of the ocular muscles and injuries of the exterior tunics of the eyeball.

Injuries of the cornea were observed by Wecker, Sidler-Huyuenin, and in the following case, seen by the author three days after delivery with the forceps: The surroundings of the left eye and lids are swollen and there are abrasions of the epidermis and suffusions of the ocular conjunctiva. The whole cornea shows a milky opacity, so that the pupil can scarcely be discerned. The epithelium is preserved except at the external margin of the limbus. Under warm applications the cornea cleared up entirely within 8 days. F. attributes the opacity to edema between the anterior strata of the cornea or below Bowman's membrane, brought about by direct pressure of the forceps. (C. Zimmermann.)

Pneumococcus Endocarditis—H. B. Preble (*The Amer. Jour. of Med. Sc.*, Nov., 1904) contributes an exhaustive article on this subject and reports three cases, two of which resulted in recovery. From an extensive study of the literature of the subject he concludes that Endocarditis complicates pneumonia in 1 per cent. of the cases and in 5 per cent. of the fatal cases. 25 per cent. of all cases of Endocarditis are due to the pneumococcus. About three-fourths of these cases are of the severe of malignant type, the exudate being massive. There is not so marked a tendency to ulceration as in cases of endocarditis due to streptococci or staphylococci. The endocarditis complicating pneumonia is almost always due to the pneumococcus although it may be due to other bacteria. It attacks the left side of the heart more often than the right, although involvement of the tricuspid and pulmonary valves occurs four times as often in pneumococcus endocarditis as in endocarditis in general. The pneumococcus attacks the aortic valve twice as often as other organisms, the mitral only half as often and the tricuspid about twenty times as often. Infarcts are common, occurring in about half the cases. Meningitis is a complication in 60 per cent. Pneumococcus Endocarditis occurs twice as often in females as in males, and occurs more frequently after 30 years of age than before. Old heart lesions favor its development.

The clinical picture does not differ from other forms. The endocarditis may develop before, during or after the pulmonary involvement or it may occur without there being any involvement of the lungs. Many of the cases show an afebrile period between the fever of the pneumonia and that of the endocarditis. This period is usually 3 to 4 days—rarely more than a week. The endocarditis may be afebrile. The duration may be of a few days or of months. The pulse is usually rapid, but bradycardia occurs oftener than in other forms of endocarditis. There are rarely any subjective symptoms, unless there is an old heart lesion. Physical signs are often entirely absent. Leucocytosis is frequently absent—blood culture will show pneumococci. The diagnosis is difficult, often impossible. It should be suspected in cases of pneumonia which are followed by irregular temperature and show no signs of empyema or other complication. The prognosis is grave. The treatment consists merely in rest, with good supporting food and stimulation.

(W. H. Washburn.)

A Contribution to the Study of Ulcerative Endocarditis—MONTGOMERY H. SICARD (*Am. Jour. of Med. Sc.*, Nov., 1904) gives the clinical history of 32 cases occurring in his experience and divides them into the following groups: 1. Cases in which the onset is sudden, the duration short with high continued fever, headache, spleen enlargement, cutaneous hemorrhages or bleeding from the mucous membranes together with evidence of inflammation in the endocardium.

2. Cases of longer duration which may persist for months, beginning gradually with irregular fever which may become remittent or intermittent, with chills and sweating, gradual loss of flesh and strength, spleen tumor, hemorrhagic eruptions, abscesses and endocarditis.

3. A group in which the chief factor is meningitis. Here there are signs of intense cerebral irritation with the addition of endocarditis, enlarged spleen, petechial hemorrhages, septic infarction and often pneumonia.

4. Cases in which the local endocardial signs are of chief prominence, the constitutional affection being slight except for the evidence of poor circulation.

In his summary the author says that malignant endocarditis is a disease of bacterial origin, these organisms being found in the blood during life, in emboli and on the heart valves after death. There is nothing clinically distinctive of the particular variety of germ causing it. Primary cases are rare—the disease usually occurring in the course of rheumatism, septicaemia, the acute infectious diseases or engrafted on an old endocarditis. Nearly all the cases are fatal. Emboli and hemorrhages are common. The urine shows evidence of nephritis. Infants and young children are almost exempt from the disease. There is no treatment that is of any consequence.

(W. H. Washburn.)

Roentgen Rays in Injuries Near the Wrist—M. I. WILBERT (*Am. Med.*, Sept. 17, 1904) states that the Röntgen rays have demonstrated not only that fractures of the lower end of the radius are frequently complicated by more or less extensive injuries, but that the other bones of the wrist joint are more subject to fracture than was formerly supposed.

Out of a total of 2,611 fractures of the extremities, 2,000 consecutive cases were recorded with considerable detail. Of these 2,000 cases 24 per cent., or a total of 481, involved one or more of the bones of the wrist joint. There were 366 cases in which the lower end of the radius was involved. In 194 of these there was also a fracture of one or more of the other bones of the wrist. The carpal bones were fractured in 142 cases, and in 85 the fracture was confined entirely to the carpus. Many of these fractures are of a nature to make them very difficult or impossible to recognize by ordinary means, and this is especially true of fractures of the carpal bones. He asserts that the greater part of the motion of the hand on the forearm is due to the motion of the carpal bones one upon the other, in the intercarpel articulations and not as is usually stated at the articulation of the carpus with the radius, consequently improperly treated fractures, particularly of the scaphoid, may interfere materially with free movement of the wrist. By far the greater number of fractures of the carpal bones were occasioned by

falls on the extended or closed hand. The usually ascribed cause being direct violence.

In treating these cases much depends on a correct diagnosis, and this being attained, proper treatment will usually insure a functionally good result. (J. D. Madison.)

Oxygen.—"The further question arises whether oxygen inhalation is likely to be of benefit in the cyanosis due to severe cardiac or pulmonary disease. Improvement is very often observed clinically, the skin losing its dark color, and the respiration and heart becoming less rapid and labored as soon as the inhalation is commenced, and alarming symptoms returning when it is stopped. This may be explained by the larger amount of oxygen dissolved in the plasma; when air is breathed, the plasma contains only about 0.6 per cent of oxygen in simple solution, but when oxygen is inhaled the percentage may rise to 3 per cent., and this may reinforce the oxygen carried by the haemoglobin. In cases in which only a small quantity of blood is carried through the lungs owing to circulatory disorder or where the aerating surface of the lungs is diminished by exudation, this small supplementary supply of oxygen must be of importance. Again the air actually inspired does not pass directly into the alveoli; but diffuses from the wider air passage into the narrower ones and then reaches the absorbent surfaces. Pure oxygen diffuses more rapidly and in larger quantity into the alveoli than when it is with nitrogen, and it is therefore conceivable that when the movement of the air in the air passages is insufficient, oxygen may give relief by diffusing in larger quantity into the alveoli. Insufficient movement of the air currents may be due to obstruction of the respiratory tract, as in asthma or severe bronchitis, or to slow and shallow breathing from depression of the center. Accordingly, the inhalation of oxygen is said to be followed by relief in some cases of asthma and bronchitis, and it has been recommended in narcotic poisoning."

"When the haemoglobin of the blood is so altered as to be incapable of transporting the *oxygen* to the tissues, as in cases of poisoning with *carbon monoxide, nitrites, chlorates,* nitrobenzol, etc., oxygen inhalation is indicated for it has been shown by Haldane and others that the plasma dissolves enough O. to maintain life when that supplied by the blood corpuscles is insufficient." (From Cushny's Pharmacology & Therapeutics, 1903.) Chas. H. Stoddard.

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ORIGINAL ARTICLES.

ON THE ESTABLISHMENT OF AN EPILEPTIC COLONY IN WISCONSIN.*

BY W. A. GORDON, M. D.,
OSHKOSH.

Epilepsy is one of the most dreadful and incurable diseases that afflicts humanity. It exists in all countries and affects all kinds and conditions of men. Ever since there were physicians on this planet, epilepsy has commanded their attention. The disease is apparently increasing in recent years until now there is one epileptic to every 600 of the population.

Able and numberless investigators have studied the malady from the prophylactic, etiologic, pathologic and therapeutic standpoints. Experts in insanity, neurology and philanthropy throughout the world are unanimous in the opinion that epileptics should be segregated and that the colonizing of the epileptic population in homes on a large tract of land is the ideal method of treatment.

New York, New Jersey, Ohio, Texas, Kansas, Pennsylvania, Massachusetts, England, Germany, Switzerland and Belgium have unreservedly adopted the colony plan as the most humane, economical and progressive method of dealing with this large, pitiable and increasing class of our fellow creatures.

These states and nations have adopted the colony and found it good. The colony for epileptics is not an innovation. It is not an experiment. No fact is more fully established than that it is the only rational, practicable and hopeful method of dealing with the victims of this measurelessly dreadful malady. This is conceded by all who

*Read before the 58th Annual Meeting of the State Medical Society of Wisconsin, Milwaukee, June 23, 1904.

are conversant with the great work already done in this and other lands. There is already a voluminous literature on this subject. There is a "National Association for the Study of Epilepsy and the Care and Treatment of Epileptics."

Wisconsin is behind the times in this important department of philanthropy. There is no longer need of argument to prove the desirability of an epileptic colony in every state in the Union. Physicians, scientists and humanitarians everywhere acknowledge the colony as the one thing needed to solve the epileptic problem. Dr. Spratling, the efficient and learned Superintendent of the Craig Colony, has very fully described an ideal colony. Dr. Peterson, the New York neurologist, has ably set forth the reasons why there should be laboratories connected with every colony, where chemists, pathologists and psychologists can study the disease.

Dr. Rutter, Superintendent of the Ohio Hospital for Epileptics, has succinctly and admirably given the practical details necessary for the successful management of colonies. Hon. W. P. Letchworth, in his elaborate volume on the care and treatment of epileptics, has compiled a complete account of what has been and is being done throughout the world in this especial sphere of scientific and benevolent endeavor.

There are about 3,000 epileptics in Wisconsin. Of these, about 275 are in the county asylums and the state hospitals. There are quite a number in the poor houses. Wherever they are, they are unwelcome. In the asylums, hospitals and poor houses they are always a disturbing element. They are a terror to the school and the home. The spectre of the convulsion hovers over every scene which contains an epileptic.

I have always regarded the epileptics as the most unfortunate class of people on the earth. All rational persons are hushed and awed in the presence of death. The epileptic undoubtedly experiences all the pangs of death every time he loses consciousness.

The superintendents of insane hospitals throughout the world unanimously deplore the presence of epileptics among the insane. The insane should be shielded from the epileptic. The epileptic should be kept from the injurious influence of the insane. They mutually react harmfully upon each other in many ways. The sane and insane epileptics should be kept on the same tract of land, the insane being in a place apart. Many of the insane could be with the sane for considerable periods each year. They would greatly appreciate

during their lucid periods the transfer to the atmosphere of rationality.

The exercise of the opportunities afforded for a continual adjustment of patients to their varying needs—its adaptability—is one of the important functions of a colony.

As epilepsy is especially a disease of youth, scientific treatment should be initiated as soon as possible after the diagnosis is established. There is a class of young epileptics that can by thorough and prolonged mental and physical training be made self supporting members of the community, who would if neglected be a burden upon society.

The years of training in a colony modify the plastic brain of the youthful epileptic for the better as it cannot be changed in any other way.

The idea that these persons are not rescued for reproductive purposes should find abiding lodgement in the public mind.

Some of those who are members of a colony for life are more than self supporting. The learning of handicrafts is one of the greatest features of colony life.

The protection of society from a dangerous class is an important point. There is a great bond of sympathy between the victims of this disease. They take care of each other with much solicitude when the convulsion comes.

It is only in a colony that constant and continuous dietetic, hygienic, moral, hydro-therapeutic, educational, industrial and medicinal treatment can be thoroughly carried out.

In my opinion it would be proper for this Society to interest the people of Wisconsin in the creation of a colony for our unfortunates that would be second to none in the world.

The people are always ready and willing to do what ought to be done in the care of the defective classes, when once they understand the necessities of the case.

It is not for us to timidly approach every political rounder who happens to be in the legislature. We do not have to abase ourselves before the lobbyist, the wire puller and the small bore professional politician. The members of the Society can reach and influence the men who control the rounders.

There is enough power in this Society to influence those whom the politicians are anxious to obey. The pulpit and the press will advocate this great charity when they have been enlightened concerning its mission.

If the editors and preachers are with us, who shall prevail against us? The legislature of Wisconsin should be firmly informed that 2,000 acres of land and $300,000 in money should be set apart for the beginning of an epileptic colony, where this much neglected and vastly afflicted class of sufferers may have care and treatment commensurate with their needs.

Discussion.

Dr. Richard Dewey, Wauwatosa: I am very glad that Dr. Gordon has brought this subject to the attention of the State Medical Society. It is one in which I have myself been deeply interested for many years. Twenty years ago, as I remember, a paper which I wrote upon the subject of separating epileptic patients from the insane in institutions of the insane, was published in the *American Journal of Insanity*, and at that time there was not a separate institution in existence for epilepties.

From the figures Dr. Gordon has given you, you will see that great progress has been made. Every one of the more progressive states has a project of that kind either already well under way, or in its inception; and Wisconsin is to a certain extent behind the times, as I believe there has until now been scarcely any agitation on this subject.

The condition of the epileptic is one of the utmost misfortune, whether he be mentally impaired so that he is necessarily deprived of his liberty and placed in an asylum, or whether he be a sane epileptic, as a large proportion of them are, capable of being, under ordinary circumstances, a member of society, except for his attacks; but that one fact is a bar between him and his fellow-men. Any person subject to epileptic attacks coming with any frequency at all, that occur we will say, once in three months, who is perfectly well in the mean time, as well as you or I, cannot secure employment; he is barred from any ordinary avocation; though that brief interval of an attack, perhaps not occupying more than a few hours in the course of a year, is the extent of his actual suffering from epilepsy. But the fact of his being subject to a sickness of that kind is a complete handicap to him.

A further fact remains that the attack in itself is a spectacle of great horror to those who witness it; and, furthermore, there is danger in connection with it, as many epilepties become violent and homicidal during, before or after their attacks; and the occurrence of startling crimes in a community is often the result of an epileptic seizure in which the patient, being totally in an automatic condition, commits some act of violence.

I reported not long ago the case of a young man brought to me from a distant state, who had been indicted for burglary. He was found to have broken into a dry goods store in the middle of the night and was detected with a pair of socks in his possession which were worth one nickel, which was the price marked upon them. But his condition was not recognized, he was placed under indictment and would have been tried and probably convicted, but for the community and the court being satisfied that he was not conscious (as he was not) of his act. After he came to me he had attacks of somnambulism, would get up in the night and go about and perform very complicated acts while totally unconscious; and I read within a few days in a

newspaper of an epileptic boy who broke into a post office in the middle of the night, unlocked one or more doors, and forced his way in and had opened a drawer or till of some kind, when he came to himself, and went home to his father and stated the fact of his having committed this act without his knowledge. He had emerged from his automatic or somnambulistic condition just at the moment when he would otherwise have committed a criminal act.

Epileptics fall into two classes, those practically sane except during the time of the attacks, and those who, through the frequent occurrence of attacks have become insane, and therefore are required to be cared for and committed to some institution.

There are in the State of Wisconsin, in the institutions, I believe, and county asylums (aside from those who are in the community at large amounting in number probably to 2,000), about 275 epileptics. These latter are very badly placed both for themselves and the patients around them. Their frequent attacks are distressing and repulsive to other patients, and their condition is one which does not require confinement except at the very time of the attack, and they are capable of being useful and industrious; and an industrial colony is the ideal method of caring for such epileptics, and in fact for all who are afflicted in that way—for different methods of employment, agricultural employment and shop work of various kinds can be provided for these patients under a supervision which renders their care safe and the prevention of any serious violence. Being provided for in an institution of this kind they can be rendered both useful and harmless, as much so as their disease will admit of. I speak of the number of epileptics at large in the state outside of institutions amounting to 2,000, because it is found that is the general proportion—about one epileptic to every 500 or 600 of the population.

Then there is the question of cure. Of course epilepsy is, to a certain extent, and probably to a much larger extent than we have as yet any idea, curable, if it receives early treatment. At the time of the first attack, if children come under proper care and treatment, many cases can be cured and remain permanently well. I have in the course of my experience now accumulated a number of cases of what may be called cures in epilepsy. I would not consider a patient cured who had not remained for at least three years and probably five years free from any attacks, but there are many such cases recorded and they are being recorded in increasing numbers, and I will not detain you further than to say that I trust sincerely that a movement will be inaugurated which will result in Wisconsin taking an honorable place among those states that have made a wise provision for this class of unfortunate people.

Dr. S. R. Moyer, Monroe: My experience has been a little along this line, because I am county physician of the county where I reside, and there are six epileptics in that institution. Sometimes they are in the county part and then are sent back to the insane department, when they cannot take care of them. Two of them are excellent young men who go about their work well dressed and of good appearance; but they are obliged to associate with the insane, and it makes it a great hardship for them; they have no friends to keep them, and there are some of the noisy patients at night, nocturnal

epilepties, and that is the reason they are in the insane asylum, and I hope some one will suggest some measure for this Society to take either here, or in the House of Delegates, so as to get some practical results in this matter as soon as possible.

Dr. E. W. Bartlett, Milwaukee: I need not stop to discuss the merits of the paper just read, because I think every gentleman who has heard it will immediately recognize its value, but I rise simply to urge the gentlemen to immediate action and to bear in mind how much good this Society has done in times past. If you look through the proceedings of this Society you will find that it passed resolutions asking that the state establish an insane asylum—that was many years ago—and see the result; we have splendid asylums, well equipped, with laboratories. good physicians, and the insane get good care.

This Society appointed a committee and donated money for the purpose of getting a medical law passed, so that we might have a better practice of medicine here; and after 21 years we succeeded in getting a law which is working very well, and the medical practice of this state is advancing with great rapidity.

Some years ago, when Mr. Rusk was Governor, we passed a resolution that an institution might be established for the benefit of the feeble-minded. We went to the Legislature and got $20,000 appropriated by them, but Uncle Jerry could not see it and vetoed the bill. Since then we have had another bill passed and now have a splendid institution of that sort.

This Society has always endeavored to act with a purpose of ameliorating the condition of humanity, and has been successful.

I would urge upon this Society to appoint a committee to attend to this matter, and work until we succeed in accomplishing our purpose.

A REVIEW OF LARYNGEAL DIPHTHERIA WITH REPORT OF CASES.*

BY P. H. McGOVERN, M. D.,

MILWAUKEE.

The subject of laryngeal diphtheria with a report of some personal cases and a review of cases taken from different hospitals, must necessarily be somewhat broadened so as to include the management of not only laryngeal diphtheria, but any other form that may become laryngeal by extension.

Of all the lesions of diphtheria. the one perhaps requiring most prompt and decisive action in order to save life, is laryngeal diphtheria. Not only is the patient subject to dangerous septic absorption and the degenerative changes that must follow the toxic action of

*Read before the 58th Annual Meeting of the State Medical Society of Wisconsin, Milwaukee, June 24, 1904.

the disease, but also on account of the anatomical form of the larynx a small amount of false membrane situated at or about the vocal cords or in the lower portion of the laryngeal box may obstruct the passage of air and thus lead directly to asphyxiation and carbonic acid poisoning. The stage of invasion where there is reddening of the mucous membrane but without obstruction, does not admit of an early diagnosis, and until a croupy condition manifests itself there is little to suggest a laryngeal attack of diphtheria. In the course of 24 hours the second stage of the disease will have been reached—the stage of spasms. When a laryngoscopic examination can be made, a false membrane will be found on the epiglottis, over the vocal cords, and upon the mucous membrane of the larynx, extending even into the upper trachea. The symptoms of stenosis become gradually more marked. Spasmodic attacks of cough, restlessness of the patient, perhaps some cyanosis of the face, and swelling of the tissues of the face and neck, and profuse perspiration of the entire head will be some of the signs of impending danger. Aphonia may be complete or partial; the respiration while not unduly rapid, is harsh and noisy. The accessory muscles of respiration are all called into play; there is retraction above the clavicle and in the epigastrium. From time to time apparent spasm of the larynx causing asphyxiation will impel the patient to suddenly sit erect, and cough with great violence, and the face may become livid. After the attack passes, the patient will sink down exhausted; the breathing while showing marked stenosis, will be more free. As the disease advances, the third stage, that of asphyxiation is ushered in; the accessory respiratory muscles are all called into play most of the time. The inspirations are asthmatic in character, the air hunger becomes marked. The facial expression is anxious, cyanosis deepens, and suffocating attacks are more frequent, in any one of which death may take place; or the patient may pass into coma, cease to struggle and death follow.

This is a picture which is familiar to every physician and causes uneasy nights to himself as well as to the family. Fortunately, since the use of antitoxin, we see fewer of those extreme cases.

The dangers of severe cases of laryngeal diphtheria are not always limited to the local lesion and absorption of toxin from the membrane; nor to the dangers of asphyxiation and carbonic acid poisoning. There is a third danger which we are just beginning to note and that is the danger following a general infection. When the membrane is located in the larynx, in the nose, or in the bronchi and lungs, on account of the nature of the tissue involved, absorption of the specific

toxic product goes on rapidly, while in pharyngeal and faucial cases the absorption is less rapid, and there is less danger of a general infection.

Councilman, Mallory and Price, in their monograph on the pathology and bacteriology of diphtheria, in which they reviewed their minute study of 220 fatal cases, rendered a distinct service to medicine and threw new light upon the pathology of diphtheria. They took cultures from the heart's blood, liver, spleen and kidney in 153 cases dead from diphtheria. The specific diptheritic organism was found, 7 times in the blood, 30 times in the liver, 19 times in the spleen, and 27 times in the kidneys. In 82 out of 88 cases of pneumonia secondary to diphtheria, they found the specific Klebs-Loeffler bacillus in the exudate of the finer bronchi. They concluded from this extensive study that diphtheria may become a generalized bacterial infection.

Kunstack, in a series of 12 post mortem examinations, found evidences of a generalized infection in 9 of the cases; and this was always true in his laryngeal cases. This general eruption of bacilli from a local diphtheritic lesion is not unlike the generalized infections seen in pneumonia, and both classes of cases have unfortunately too often a fatal termination. In most of the severe cases where death took place during or after the third day, degenerative changes could be noted in the heart muscle, the kidneys, and in the nervous system, particularly the peripheral motor nerves. This fact points the reason why injections of antitoxin late in the course of the disease so often fail to cure; for we must remember that antitoxin will not repair damage already done. To neutralize toxines and break up the Klebs-Loeffler bacillus seems to be the only power antitoxic serum possesses.

Dr. Cairns, in his report of the use of antitoxin at the Glasgow Fever Hospital, reviews 50 consecutive cases all of which were severe, and 20 of which were so severe that he had to resort to intravenous injections. The mortality was 6 per cent.

In all such cases he recommends an initial intravenous injection of 20 to 25,000 units, to be repeated if necessary. In order that we may thoroughly understand the condition of some of the cases which came under his care, I will review a few of his severer ones.

Case 1.—A child aged 2 years, in the 5th day of the disease, with a history of dyspnea and stridor lasting 36 hours prior to admission. She was pulseless and apparently moribund and the surface of the body was livid. The heart was beating at the rate of 185 to 195. The laryngeal obstruction was almost complete; respirations were 50 to 60 a minute. Tracheotomy was at once performed, and on opening the trachea, dark colored muco-purulent secretion and membrane oozed

from the wound. On insertion of the tube the breathing became more rapid, but easier. The lividity was not decreased and there were other evidences of wide spread pneumonia. Twenty-six thousand units of serum were injected into the median basilic vein. The pulse fell to 170, and then rose again to 200 the next day, and respirations rose to 90 a minute. The urine was loaded with albumen and the patient was extremely restless. Twelve hours more showed improvement in every way. A copious muco-purulent discharge ran from the tube. Pulse and temperature fell gradually. The urine cleared up and the tube was removed on the 8th day after admission.

Case 2.—A girl, aged three years, was suffering from laryngeal obstruction, and a diphtheritic patch covered the right tonsil. The pulse was rapid and irregular, and respirations were 40 per minute. The patient presented a profound toxemic appearance. Ten thousand units were injected subcutaneously. Several hours after admission, she was taken with a violent spasm of dyspnea, in which the face became cyanosed, and after repeated attempts at inspiration, she fell back on the pillow apparently dead. The nurse at once performed artificial respiration, the trachea was opened, and a piece of membrane extracted. Twenty-one thousand units of antitoxin were given intravenously. Within 24 hours the pulse fell from 160 to 120, the toxemic appearance gradually disappeared, and the convalescence, notwithstanding a bronchopneumonia and nephritis, went on uninterruptedly to recovery.

These two cases are fair examples of the severer cases which came under Dr. Cairns' management. Among the grateful results which Dr. Cairns noticed following intravenous injections, are the following:

1st—The strikingly rapid disappearance of the signs of toxemia.

2nd—The surprisingly rapid disappearance of large glandular enlargements in malignant cases.

3rd—In pneumonic cases, the diminution of restlessness, which is such a distressing feature in these cases.

Dr. McCollom, in a review of the operative cases of diphtheria in Boston, estimates that 20 per cent. of the deaths are caused by blocking of the bronchi by diphtheritic membrane. This blocking of the tubes with hard muco-purulent discharge, indicates an extension of the membrane, and demands heroic administration of serum. He says that the more hopeless the case appears when the physician is first called, the more urgent is the demand for large doses of serum. From his reported cases of laryngeal diphtheria I cite the following:

Case 1.—A boy of six, ill three days on admission; membrane on each tonsil and on the uvula, a profuse nasal discharge, dyspnea very great with marked cyanosis. He was intubated at once and given 4,000 units of antitoxin. On the second day after admission the dyspnea became more marked and the doses of antitoxin became more frequent and larger. In four days the patient received 56,000 units

of antitoxin without any injurious effect and with positive relief. A serum rash was the only thing that marred the recovery. There was no paralysis.

Case 2.—A boy, aged eight years, on entrance with profound prostration, extensive membrane of the throat, and marked dyspnea. Patient had 56,000 units of antitoxin; recovery was good without paralysis or serum eruption.

Case 3.—A man, aged 34 years, was ill four days when admitted. There was extensive membrane on each tonsil and on the uvula, profuse nasal discharge, some laryngeal obstruction, and marked cervical glandular enlargement. The picture was that of a patient moribund from diphtheria. The condition of the man seemed absolutely hopeless, but acting on the principal that no patient ill with diphtheria should be considered beyond help, eight thousand units of antitoxin were given, and 4,000 units more in three hours, the dose to be repeated every four hours until signs of improvement manifested themselves. He received 92,000 units in all. He made a good recovery, but showed post-diphtheritic paralysis three weeks after he was discharged.

Drs. Champion and Vaughan give a detailed account of one interesting case in their series. Patient eighteen months of age was seen on the third day of her illness, with a history of stridor and dyspnea for two days. On admission there was membrane on the right tonsil, and evidence of advanced laryngeal obstruction. The temperature was 103, pulse rate 160, respirations 40. Five thousand units of antitoxin were given, and antitoxin was repeated each day until the fourth, the patient receiving 18,000 units, when the temperature was 101°, pulse 130 and respirations 40. On the fifth day bronchopneumonia on the right side became manifest, and the patient was passing but a small amount of urine. The temperature again rose to 103.6°, and a nasal discharge set in, which on examination showed diphtheria bacilli and staphylococci, and the left lung became involved. On the sixth day the temperature reached 104°. Three thousand units of antitoxin were given, and the temperature fell to 101.2°. For the next three or four days the temperature oscillated between 101° and 105°. Two thousand units of antitoxin were administered. There was a hemorrhagic rash on the hands and feet and on the legs. On the 18th day of the disease the trachea only was covered with a diphtheritic membrane, and 2,000 units were given daily for four days, when the membrane disappeared from the wound. In all 31,000 units were administered. On the 26th day there was an internal squint of the left eye. She was discharged without further signs of paralysis.

In September, 1903, I was called to see a child aged two years, in a house in which I had treated diphtheria the previous spring. I found the patient sitting up in bed, with marked dyspnea, rapid pulse, temperature 98°. An examination of the throat showed membrane on each tonsil and on the soft palate. I ordered the patient taken to the 7th Street Contagious Hospital and injected 2,000 units of Parke, Davis' serum. In four hours I repeated the dose of 2,000 units. The

next morning the patient's temperature was 102.6°, pulse 120, respirations 48. The patient was reported very restless at night and he evidently was working harder for air than he did the previous evening. The second day he received four doses of 2,000 units each, and as his breathing became distressingly difficult, and the stridor marked, on consultation with Dr. Hitz, we decided to intubate the child. This relieved the breathing, and the child manifested less restlessness. On the third day the temperature was 102.8°, pulse 144, respirations 48, and Dr. Hitz and I decided that more antitoxin must be used. During the third day four injections of 4,000 units each were given. The next morning the temperature had dropped to 102°, and later to 101°. The pulse fell to 120 and then to 100, and the respirations dropped to 40 and then to 24. Two thousand units were given this day. Restlessness had entirely disappeared, and the patient slept well all night. On the fifth day the temperature fell to 99.6°, the pulse to 110, and the respirations remained 24. The patient was troubled with a severe paroxysmal cough, and there was frequent blocking of the tube, necessitating its removal three or four times. He made an uninterrupted recovery, showed no albumen in the urine, and only a moderate serum eruption. During the first four days of the disease the patient received 30,000 units of antitoxin, and under the increased dosage a steady improvement could be noticed. It is not always necessary to give this amount of antitoxin. I have reviewed several other cases in the 7th Street Hospital, including two other laryngeal cases in my own practice, in which only 8,000 or 10,000 units were necessary. However, we felt in this case, that, having provided against asphyxia by intubation, we would get desired results if we fearlessly went on administering serum until the symptoms changed for the better.

In most of the cases injections of from 6 to 10,000 units cause such a decline in all of the distressing symptoms, that further use of the serum does not seem indicated. However, the report of the Commissioner of Health of the City of Milwaukee, for the year 1901, shows a mortality of 20.7 per cent., and for the year 1902 a mortality of 18.2 per cent. Our Health Commissioner believes that by a proper use of antitoxin the mortality rate of diphtheria may be cut to half its present rate.

Dr. McCollom in reviewing all the cases of diphtheria in Boston from 1878 to 1900, found that before the use of antitoxin, the mortality was 35.7 per cent., and since its use, the mortality has steadily dropped until it has reached 9½ per cent. Lennox Brown compiled statistics of 11,600 cases treated in the London Hospitals from '88 to '94, and found the mortality to be 30 per cent. Since the use of antitoxin the mortality has dropped to about 18 per cent. In continental Europe the mortality in pre-antitoxin days was over 50 per cent., while in 200,000 cases collected since then the mortality is 16 per cent.

In pre-antitoxic days laryngeal diphtheria showed a mortality ranging from 75 to 85 per cent. Since that time and before the use of proper sized doses the mortality in London dropped to 38 per cent., in Glasgow 41 per cent. Dr. Park, in reviewing 750 cases of intubation in New York, found there was a mortality of about 50 per cent. In the Municipal Hospital of Philadelphia 165 laryngeal cases have a mortality of 58 per cent; in Boston 200 cases were treated with a mortality of 34 per cent.

The Clinical Society of London reports for the last few years that laryngeal cases in the London hospitals treated with serum and without operation showed a mortality of 26 per cent., while the laryngeal cases without operation and without serum showed a mortality of 66 per cent. Laryngeal cases with tracheotomy and with serum showed a mortality of 36 per cent., while laryngeal cases with tracheotomy and without serum gave a mortality of 71 per cent.

Drs. Champion and Vaughan report 43 consecutive cases of diphtheria with laryngeal obstruction at the Norfolk and Norwich Hospital. The cases were treated during the last two years, and were reported primarily to demonstrate the advantage to be derived from the free administration of antitoxin in conjunction with tracheotomy. Many of the cases were brought to the hospital *in extremis*. Thirty-nine out of 43 cases required operation. There were 10 deaths or a mortality of 23 per cent. and one-half of the deaths were in children under two years. Twenty-four cases had a pharyngeal and a laryngeal infection with a mortality of 16 per cent. Fourteen had laryngeal infection alone with a mortality of 43 per cent. This extremely high mortality in laryngeal cases is very likely due to the fact that a diagnosis was not made and antitoxin not administered early in the disease, for they further state that 6 of the laryngeal cases died from suppression of urine or bronchial pneumonia or from asphyxiation. The average dose of antitoxin administered was 9.000 units, with a maximum of 33,000 units and a minimum of 2,000 units.

In the South Department of Boston there have been 104 cases of diphtheria contracted in line of duty. Serum to the amount of 4.000 units was administered on the first day of the disease and there was not a single death. This ought to demonstrate to us the necessity of administering a moderately large dose at the very outset of the disease. In the Boston cases the method of treatment is to give about 4.000 units the first injection, if the patient is seen early in the disease, while in severe cases from 10,000 to 20,000 units may have to be administered. The physician at the bedside of a diphtheritic

patient must take into consideration the extent of the membrane, the condition of the patient, and the amount of toxin that is probably already in the circulation, and then administer serum in sufficient quantities to ameliorate the symptoms, reduce the fetid odor, and lessen the discharge, if any, from mouth, bronchi or lungs.

Mongour, in reviewing his personal experience in the use of the intravenous method in severe cases of diphtheria, concludes:

1st—That the method is safe.

2nd—That the injections do not cause an early albuminuria.

3rd—Rapid amelioration of all the symptoms.

Serum eruption appeared in 20 per cent. of his cases.

Dr. McCollom concluded upon reviewing 7,600 cases of diphtheria at the South Department in Boston, that when death occurs after the use of large doses of serum, it is due to nerve degeneration or to sepsis. In no case were there any injurious effects produced by the use of large doses of antitoxin. Albuminuria, although present in many cases, cannot be attributed to the serum.

In the face of these statistics taken from American and European hospitals—in the face of the everyday experience of the practicing physician—what objections can be honestly raised to the free use of antitoxic serum? Those who oppose the use of antitoxin in large sufficient doses point to the following unpleasant consequences of the injections:

1st—Serum eruptions.

2nd—Occasional arthralgias and myalgias following the use of serum.

3rd—They profess to believe that albuminuria and even nephritis are produced by the serum treatment.

4th—That post-diphtheritic paralysis is more frequently seen since the use of serum therapy.

Serum eruptions are undoubtedly produced by antitoxin. The eruptions are a source of annoyance to the patient for two or three days. No serious results can follow from the presence of the eruption, and therefore this is not a valid objection to the use of serum. The product from different laboratories seems to give widely different statistics on the frequency of serum eruptions. Cairns used the product from the Parke, Davis laboratories, and records a serum eruption in 70 per cent. of his cases. At our 7th Street Hospital, where serum from the same laboratory is used, eruptions are noticed in from 60 to 70 per cent. of the cases. G. Ritter von Rittershein reports 77 serum eruptions in a total of 1224 cases of diphtheria treated with antitoxin. This is in 6½ per cent. of his cases. While he does not

name the laboratory from which the serum was taken, he undoubtedly used a German product. He notes that the eruptions are becoming less frequent and less harmful as serum of higher potency and less volume is used.

Ehrmann, in reviewing eruptions arising from antitoxic, toxic and infectious causes, refers to the extensive research of Hartung, in which the latter found serum eruptions in 11 per cent. of injected cases. The German Imperial Board of Health places the serum eruptions at 8 per cent., and Berg in his series finds serum eruptions in 24 per cent. of all cases. These authors are inclined to attribute serum eruptions to the introduction of a foreign blood serum into the circulation of the patient, as Collman produced serum eruptions by using pure calf serum. But injections of human blood produced no eruptions. The serum from horses, mules and donkeys produces a greater percentage of eruptions than that from any other immunized animals. The serum derived from one immunized horse, may frequently or invariably produce serum eruptions, while that from another immunized horse may never produce an eruption.

Occasionally arthralgias and myalgias follow the use of serum. While they produce some pain and suffering for two or three days, still no serious or lasting injury comes from this complication. Hemorrhages about the joints have been recorded in several hospitals; but in every case the patient experienced no subsequent trouble.

Those who oppose antitoxin profess to believe that albuminuria and even acute nephritis may be caused by the serum treatment.

Cairns of Glasgow, who has used antitoxin as freely and fearlessly as seemed required, using as high as 80,000 units in a case, says that at no time could the presence of albumen in the urine be ascribed to the use of the serum, for many of the patients who had the largest doses showed little or no albuminuria. Prof. Woodhead, after reviewing 1,200 cases treated in the London Hospitals, concluded that the serum as a treatment for diphtheria is as sure as is quinine in malaria, and that no untoward results can be traced to its use. He avers that under the use of serum nephritis is less common than when no serum is used. The German hospitals give us statistics tending to prove that albuminuria, beyond a mere trace, is never produced by antitoxin.

Our present statistics show perhaps as large a percentage of post-diphtheritic paralysis as was found before the use of antitoxin. But we must remember that many of the severest cases now live and show paralysis, while formerly they would have died before paralysis could take place.

In concluding, permit me to urge upon you the use of larger doses of antitoxin than it has been our practice to employ. In desperate cases, when there is grave danger of a generalized infection, do not hesitate to employ large doses from the very outset. And when the condition of the patient demands it, resort to the intravenous method. Hospitals for contagious diseases in this country and abroad, have within the last two years. cut their mortality percentages in two. Let us practitioners of Wisconsin profit by the larger experience of the men in charge of those hospitals, and when we come to realize the great advantages coming from this new application of serum administration, this city and state, instead of being forced to record a mortality of 20 per cent., in all classes of cases, will find that 5 or 6 per cent. will be the highest rate of mortality. We have within our reach an absolute specific for diphtheria. Let us demonstrate our faith in its absolute efficiency by the use of larger injections in all severe cases.

Discussion.

DR. W. T. SARLES, Sparta—I want to congratulate the author on this very able paper. I say able in more senses than one, because I believe it will set the members of this society to thinking more relative to the established use of antitoxin. It has been customary with older practitioners to give minimum doses of antitoxin in the beginning. I learned early, from my connection with the Home for Dependent Children, where we have had much diphtheria and scarlet fever, that even in infants 4000 units is the least possible dose to be administered at the beginning; and that no more than 12 hours at the outset should intervene between doses, and 6 hours preferably if the case is laryngeal.

I want to add just one point to the paper, not on the subject of laryngeal diphtheria precisely, but as to the use of this same serum in scarlatinal infection, where the throat symptoms in the beginning are prominent. I had a series of cases in a recent scarlet fever epidemic, where the primary symptoms almost before the rash appeared, were those of glandular enlargement, membrane on the throat and Loeffler bacilli infection coming on almost simultaneously with the scarlatina infection. Now, in children, no matter how young, do not fail to give at least 4000 units of diphtheritic serum at your first or second visit, or within a few hours afterwards. You will never regret it, you will head off complications that invariably follow scarlatina infection. A simple case of scarlatina unaccompanied by sequelæ is not serious; it is the sequelæ that give us the nephritic and suppurative troubles following our scarlatina cases. It is the Loeffler bacillus infection of the throat that does not appear very bad, which nevertheless produces systemic infection, but you can head that trouble off by the injection of large doses of diphtheritic serum.

I want to refer you to a series of cases reported by Dr. Carlton in the McGill University at Montreal. He has been using the antistreptococcic serum

in scarlatina cases; but the serum that to my notion is the best (and I have used them all) is diphtheritic serum: it is not directed towards the scarlatina infection, but towards the early sequelæ, which give us the future trouble in those cases. Which serum should be used no doubt depends upon which infection is most in evidence in the complication of the case under treatment.

I want to endorse the paper in its statement relative to the importance of large doses of diphtheritic antitoxin, for I do not believe anybody was ever hurt by the use of the serum, and I believe that 4000 units for an infant 6 months old (which I have used) is little enough. Age does not seem to count in the matter; an infant of 6 months will tolerate as large a dose of serum as a child of 2 years. I have not used the diphtheritic serum to the extent the doctor records, but I never saw the time I would not use it if the temperature remained high and the pulse did not come down, every 6 or 12 hours till I got the effect—although 12 hours has been my limit, thinking I would not get the effect before that time—but I believe in serious cases, especially laryngeal cases of diphtheria, you cannot afford to wait 12 hours; but you should inject the serum every 4 to 6 hours, no matter how many thousand units you give, until you get the desired results.

Dr. H. B. Hitz, Milwaukee—Some 5 or 6 years ago, before the Fox River Valley Association, in the discussion of intubation, I advocated early and large doses of antitoxin, and I believed then that if it were given early enough there would be no necessity for intubation. Of course, frequently, these cases are not seen until the obstruction in the larynx has become very pronounced. I have always felt that a case of laryngeal diphtheria was a dead case unless large doses of antitoxin were administered at the outset. Many of the cases that have been intubated, and died within a short period of time thereafter, have resulted from neglecting this principle. I think one might as well kill the patient by the use of antitoxin (if antitoxin does any harm) as to let the patient die without the use of it; and for a long time I have advocated large and copious doses. I have never given as much as Dr. McGovern did in his case—I never found it necessary—but I believe even the dose he administered might be considered small if the desired result was not obtained. In the case that he has quoted, I was called in consultation, and we decided that the child's condition was nearly hopeless. The only thing to have done was to crowd the anti-toxin, and the satisfactory result of this treatment is a remarkable one.

I wish to congratulate the doctor upon the splendid paper that he has read.

Dr. Gilbert E. Seaman, Milwaukee: At the meeting of the American Medical Association at Atlantic City, Dr. B. R. Shurly, of Detroit, reported a series of over 300 cases of intubation in diphtheria, and during the reading of his paper he stated that these cases were treated at the Municipal Hospital in Detroit. He gave his dosage of antitoxin, and I noted that it was rather small. In the discussion which followed the presentation of the paper, there was astonishment expressed that one man during a rather short period of time should have 300 cases that required intubation. I believe, and it was the opinion of a great many, that the reason why intubation seemed to be

required in so many cases was the fact that the dosage of antitoxin was too small. I endorse the views of Dr. McGovern upon this subject.

DR. J. P. CONNELL, Fond du Lac: I wish to emphasize and add my experience to the splendid paper which was just read advocating the large doses of antitoxin. During the past four years, Dr. Twohig (my partner) and myself treated about one hundred cases of diphtheria. In the first cases treated, we used small doses, 1000-2000 units, but we did not get the results we expected. During the past two or three years we used larger doses, injecting in no patient less than 3000-4000 units, and if there is much adenitis we inject 6000 as an initial dose. If we get no reaction in twenty-four hours, inject 3000-4000 more.

We seldom were obliged to inject more than 6000 if it were used during the first twenty-four hours of the disease. Injections after the third to fourth day, when there were other infections, were not nearly so efficacious as those done early, and seldom did any good. Injections after a week had no effect whatever.

DR. P. H. McGOVERN (closing): One of the principal reasons I had for writing this paper is the fact of an apparent opposition in the 7th Street Hospital to the use of large doses of antitoxin on account of producing nephritis! I was told by the nurses, look out, you are going to have suppression of urine just as sure as the world. I saw cases there with suppression of urine, but they were cases that were not treated for five days, and got a few thousand units after they came in. No case treated early and with large doses of antitoxin developed albuminuria or nephritis to amount to anything. I found in some more of my cases of laryngeal diphtheria, that by giving about 6000 units the first time I saw them, and 4000 after that, intubation or tracheotomy was not indicated.

In this country we are leaning strongly toward intubation, and I think it is the proper course. In the British Isles they still stick to tracheotomy with very gratifying results. You cannot get any better results than 6½% mortality in laryngeal cases in Glasgow Hospital.

Leaving a large amount of raw surface open for implantation and growth of germs is unwise; but if you are skillful enough to slide the tube in without abrading the membrane the results will be good. If, however, the tube tears off patches of mucous membrane from the throat as it passes down, you had better use tracheotomy; otherwise intubation is the indication.

AFFECTIONS OF THE FACIAL NERVE IN DISEASES OF THE EAR.*

BY C. ZIMMERMANN, M. D.,
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The facial nerve becomes, by its course through the temporal bone, largely exposed to ear diseases, in which it frequently participates. Arising from the grey nucleus at the floor of the 4th ventricle, it leaves the medulla with two roots at the posterior margin of the pons, and, accompanied by the 8th nerve, and surrounded by an arachnoidal and pial sheath, enters the internal auditory meatus, which is lined with a prolongation of the dura mater. Through an opening in the upper part, it passes, above and between cochlea and vestibulum into the Fallopian canal, at the knee of which it forms the geniculate ganglion. Thence it proceeds horizontally in the inner wall of the tympanic cavity, above the oval window, in the projecting ridge of the Fallopian canal, below and in front of the horizontal semicircular canal, in the floor of the aditus where, in a second knee, it bends vertically downward and runs in the posterior wall of the external meatus to the stylo-mastoid foramen. Within the temporal bone the facial nerve sends off three branches: the large petrosal nerve from the geniculate ganglion through the hiatus of the Fallopian canal in the Vidian to the spheno-palatine ganglion, the stapedius through the canal in the eminentia pyramidalis to the stapedius muscle, and the chorda tympani through its canaliculus, along the inner surface of the memb. tymp. between hammer and long process of anvil to the lingual nerve.

A predisposition to facial affections may be given by *anatomical abnormalities*, as the frequent occurrence of dehiscences of the Fallopian canal, especially at the projecting ridge, variations of the lumen and the thickness of its wall.

The *congenital palsies* of the facial nerve are the consequence of insufficient development of the petrous bone and are generally associated with malformations of the external ear, parietal bones, lower jaw and other parts of the face (Souques, Heller, Levi and H. de Rothschild [Arch. f. Ohrenh., 60, 1904, p. 308, 309]). In a case of Marfan and Armand—Delille (A. f. O., 54, 1901, p. 161) the trunk of the facial nerve was lacking. In place of the petrous bone there was only an osseous mass, without regular bone structure,

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no opening of the internal meatus, nor a facial canal. The 7th and 8th nerves were reduced to thin threads and the facial consisted of a few atrophic cells, all secondary to the original disturbance in the petrous bone. Stern, however, contends, that it was due to an arrest of development of the nervous apparatus, as it does not fit into the two well known groups of congenital facial paralysis, *viz.:* 1. bilateral paralysis of the 6th nerve and other congenital malformations. 2. Unilateral paralysis, mostly associated with sensitive and vasomotor disturbances.

The *family type* of facial paralysis, associated with hemiatrophy of the face, asymmetry of the bones of the skull and face, atresia of the meatus, rudimentary auricle, is attributed by Sarbo and Sugar (A. f. O., 60, p. 123 and 58) to stenosis of the Fallopian canal, owing to anomalies in the development of the petrous bone, *i. e.,* hypoplasia.

Facial paralysis was sometimes observed in affections of the *auricle and external meatus,* but more as a result of reflex, as *e.g.* auricular herpes zoster (Politzer and Tomrka, A. f. O., 49, 1900, p. 28) otitis externa (Treitel) or cerumінal plugs (Boke, Czaig), Epidermic plugs, however, may produce facial paralysis by pressure if the nerve is laid bare by atrophy and absorption of the walls of its canal (Hessler, A. f. O., 42, p. 12, and 2 cases of Kirk, Duncanson and Weil).

Gellé (A. f. O., 41, p. 154) described 10 cases of acute subcutaneous phlegmon and edema around the ear, forehead and neck, with resolution after 8 to 12 days without suppuration, but facial paralysis in some of them, with symptoms of deep-seated affections of the ear, probably due to osteoperiostitis of the Fallopian canal, or old purulent processes.

Comparatively more frequently facial paralysis occurs in acute *affections of the middle ear,* in serous and mucous catarrh, acute serous and purulent otitis media, if, in dehiscences of the walls of the facial canal, the nerve is exposed to direct pressure from the swollen mucous membrane of the tympanic cavity or accumulated exudations. Or the inflammation may be propagated to the neurilemma, with resulting perineuritis, through the vessels, perforating the bone, or by compression of the nerve by the simple congestion of the periosteum or the engorged stylomastoid artery in the common canal. This (Lamois, A. f. O., 41, p. 147) may be the case even in light forms, in which the subjective symptoms of inflammations of the ear may fail to attract attention. The relapsing facial paralysis in persons with predisposition to acute angina or nasopharyngitis, with consecutive acute otitis media, has probably its origin in the latter. Un-

doubtedly many of the so-called rheumatic affections of the facial nerve were of otogenous origin. Therefore, the examination of the ears should never be omitted in such cases, on account of the prognostic and therapeutic importance, since paracentesis may at once relieve the affliction—Tomrka, Bérard, Deleau, (A. f. O., 49, p. 29) de Ponthiere (Centralbl. f. Chir., 1899, p. 1237), Delsaux (A. f. O., 60, 1903, p. 147), Damieno (A. f. O., 46, 1899, p. 280).

On the other hand, not every facial paralysis, in a patient who has an ear trouble, is due to the latter, as the following case of a rheumatic palsy will show: L. E., 25 years old, had chronic aural catarrh from her 16th year, after scarlet fever. On May 17, 1903, after a week of hard work and sleeping in a room with three windows open the night before, although not directly exposed to draught, she noticed in the morning and all day a peculiar sensation in her tongue, *i. e.,* she had no taste, and, towards evening, the right eye also was affected. The next day the right side of the face was paralysed and she experienced pain in face and ear for a week, being very sensitive to loud sounds. Faradic treatment after 6 months had no effect. About this time contracture had set in, for which she applied massage. After a year this contracture still persists and she cannot move that side of the face as well as the other, chewing in particular is difficult on that side.

The relative frequency of facial paralysis in acute purulent otitis media in children is due to the imperfect formation of the osseous wall of the facial canal and requires opening of the mastoid as early as possible (R. Lake, Centralbl. f. Chir., 1895, p. 814). Knapp (A. f. O., 41, p. 159) saw facial paralysis in acute purulent otitis media and mastoiditis, which disappeared by operation In a case of Jack (Trans. of American Otol. Soc., Vol. XI., 1896), acute purulent otitis media had led to caries of the Fallopian canal with facial paralysis, causing severe pain, but without involving the mastoid process. Entering towards the Fallopian canal, 6 mm. inwards from the antrum, a small cavity was reached, filled with pus, the cleaning of which removed the pain and cured the affection. Panse (A. f. O., 1898, 45, p. 124) found postmortem, a suppuration of the labyrinth after acute otitis media, with the auditory nerve destroyed by pus and the facial nerve infiltrated with round cells.

One can readily conceive that the pathological changes in *chronic purulent otitis media* will give rise to facial paralysis. Here we not only find conditions similar to those mentioned under the acute form (propagation of the inflammation of the tympanic cavity through the nervous stapedius, the artery or the chorda tympani, conveyance of pus

through the eminentia pyramidalis or from the mastoid through the stylomastoid foramen), but also the mucous membrane with the closely underlying periosteum may be destroyed, affecting the bone and finally the nerve. Slight facial paralysis is frequently met with in chronic ear suppurations, characterized by greater shallowness of the naso-labial fold and a diminished energy of the facial muscles of the corresponding side. Thus it may be easily overlooked, if not especially searched for.

According to statistics by Schwabach, facial paralysis in *tuberculous* otitis media is 18 times more frequent than in the simple form, and is an ominous symptom, as it generally occurs shortly before death. Externally the mastoid may appear scarcely changed, while an extensive destruction has taken place in the interior, so that the facial nerve may be paralysed in an apparently early stage of the ear affection and thus be of diagnostic and prognostic value (Milligan. A. f. O., 47, 1899, p. 222). Pifll (A. f. O., 1900, 48, p. 301) found miliary tubercles in the tissue of the denuded facial nerve, while in a case reported by Manasse (A. f. O., 1896, 41, p. 621) complete facial paralysis with total deafness was caused by a solitary large tubercle of the pons which had damaged the auditory and facial nerves in the internal meatus.

Syphilis may also create facial paralysis by compression of the nerve at the cranial base, by gummatous meningitis, or gummata in the Fallopian canal. The paralysis which may occur in the early stage, a few weeks after primary infection, is very likely due to neuritis, (Oppenheimer, Boix, Goldflam, Balzer and Faure—Beaulieu, C. Bl. f. Chir., 1903, p. 501, and Grainicher.)

The most frequent cause of facial paralysis is destruction of the Fallopian canal by *caries* and *necrosis of the petrous bone*, subsequent to chronic purulent otitis media, either genuine or induced by infectious diseases, as, besides tuberculosis and syphilis, by diphtheria, scarlet fever, measles, influenza, typhoid, leukemia, epidemic cerebro-spinal meningitis (Tomka, p. 32). Here the pus breaks through the carious walls of the canal or a sequestrum compresses the nerve, or the latter lacerates it during exfoliation. (Buhe, A. f. O., 57, p. 101). Gerber (A. f. O., 60, 1903, p. 16) found among 90 cases of necrosis of the labyrinth, published up to 1903, reports on the facial nerve in only 65. In 77 per cent. the facial nerve was paralysed. Bezold saw it in 83 per cent. of his cases. Gerber, however, thinks that the number of cases of lasting facial paralysis corresponds with the number of extensive necrosis of the labyrinth. It generally follows the first attacks of vertigo after one or a few months, and is considered

as a symptom of demarcation and migration of the sequestrum. In two exceptional cases, however, (Gerber and Herzfeld) the paralysis set in simultaneously with the suppuration.

Other causes of facial paralysis may be *new formations* of the hearing organ, developing in the course of chronic purulent otitis media, as polypi, cholesteatoma, exostosis and hyperostosis, or tumors of the petrous bone or of the cranial base, growing towards the internal meatus. In the latter the facial paralysis is accompanied by nervous deafness and pontine and cerebellar symptoms.

If the facial canal is opened, the suppuration of the middle ear may be propagated to the posterior cranial cavity, along the canal through the internal meatus, or to the middle cranial fossa, through the hiatus of the Fallopian canal. Vice versa *otitic cerebral complications* may damage the intracranial portion of the facial nerve, or its centers by hemorrhages from disturbances of circulation, induced by the former, *e. g.*, thrombosis of the sinus. The complex of symptoms thus arising, and the manner in which the facial nerve participates, may help to determine the localization of the process. Koerner groups the facial paralysis in abscess of the brain under the following causes: 1. Lesion within the diseased temporal bone (peripheral homolateral paralysis); 2, Compression of the entrance into the internal meatus by cerebellar abscess (homolateral paralysis); 3, Distant action of an abscess of the temporal lobe on the internal capsule (crossed central paralysis); 4, Distant action of a cerebellar abscess on the pons; 5, Focal symptoms of an abscess of the pons. In both these cases central, homolateral, crossed or bilateral paralysis.

Traumatism may produce facial paralysis, either directly as by stabs, shots, foreign bodies, by fractures of the base of the skull, involving the temporal bone and the facial canal, or indirectly, by subsequent hemorrhages or suppurations, or by caustic and thermic injuries. The seat of predilection for traumatic fissures is the region of the hiatus of the Fallopian canal (Zaufal). The facial paralysis occurs more frequently in *fractures* that are perpendicular or oblique to the axis of the pyramid, than in those parallel to it, it follows the fracture immediately and is complete. According to Vialle (A. f. O., 60, 1904, p. 308), the secondary palsies are exceptionally rare, *i. e.*, those which, at the earliest, set in the following day, and may develop gradually or suddenly, be complete or only partial. In two of his cases facial paralysis, which had set in on the second day, healed after 27 and 38 days respectively. In such cases interstitial hemorrhages were found most frequently in the descending portion of the facial nerve (Barnick, A. f. O., 43, 1897, p. 37).

I observed a secondary facial paralysis, caused by the pressure of extravasated blood, perhaps from a fracture which apparently did not involve the facial canal, or from a severe contusion, in a man aged 50, who, on Nov. 14, 1901, fell from the platform of an electric car and struck the right side of his head. He lost consciousness, but was told that much blood came out of the right ear, and, from that time, suffers from vertigo and deafness. On Nov. 20th I saw him for the first time and found: R. Meatus filled with dried blood and macerated epidermis. Vertical rupture of lower portion of Mt. (Hearing: watch not at all, tuning fork better in right ear over mastoid. Loud voice at one foot; Rinné negative.) Nov. 21, quite a profuse sanguinolent discharge; Nov. 22, *paralysis of right facial nerve*, more pronounced in the lower than in the upper branches. The right eye can be closed, but not as tightly and energetically as the left. (Ophth.: myopia, conus all around, no other changes.) Nov. 24, perforation closed. *Facial paralysis complete.* Catheterism improves hearing considerably. Nov. 30, details of *Mt.* can be discerned. Hearing is improving under catheterism, so that the patient gives up treatment and commences to work. I did not see him again until May 22, 1902, when I found the *facial paralysis entirely cured* and his *hearing normal.*

The facial nerve may be injured in *various operations on the ear*; in extractions of foreign bodies, wedged into the tympanic cavity, in removal of polypi and granulations by the snare or sharp spoon if the walls of the Fallopian canal are defective, in cauterizations with nitrate of silver or chromic acid, excision of the ossicles, if the anvil does not readily follow and an infraction of the near facial canal is produced by applying too great a force to the anvil hook, concussion from the use of the hammer in mastoid operations.

If in opening the *mastoid process* the chisel is used beyond a certain depth, the facial canal may be injured. In this respect, besides other advantages over the simple opening, great progress has been made by the method of Stacke, who taught how to avoid the facial nerve. Schwartze (Handbuch II, p. 825), however, opposes the assertion of Stacke that an injury of the facial nerve by his method of operating is impossible, if the Fallopian canal is intact. It is possible, without touching the medial wall of the tympanic cavity, in the descending portion of the Fallopian canal, which sometimes shows such individual variations in its course that it may be encountered where least expected. Schwartze in a recent paper (A. f. O., 57, 1903, p. 96), distinguished between two extremes—a steep, or very oblique trend, "Steilverlauf and Flachverlauf," and an intermediate, which he calls "Schrägverlauf." The more steep the course of the facial canal, the less dangerous is the operation, but the danger is increased the more laterally the canal runs towards the

meatus. Injury occurs easiest, if, in chiselling away the posterior wall of the meatus, a too horizontal direction is pursued, instead of one more upwards and backwards. The danger is greatest when the mastoid disease extends below the horizontal plane through the floor of the aditus ad antrum. While here the facial lies far inward from the upper portion of the tympanic margin, it passes in its downward course more or less so far laterally, that it can come not only into the plane of the lower part of the tympanic margin (Steilverlauf) but even far laterally from the lower part of the tympanic margin (Flachverlauf.) Another possibility of injuring the facial nerve is more or less favored by its canal approaching more or less the surface of the posterior wall of the meatus. In one of Schwartze's specimens the facial directly touched the wall of the meatus, in another one it kept 1 cm. distant from it. The facial can come so near to the surface of the mastoid process, that it may be injured by the first strokes of the chisel. By what these anomalies are caused and from what symptoms they may be anticipated before the operation, is still to be elucidated by further researches.

Streit (A. f. O., 58, p. 233) recently described a case of oblique course with unusually marked displacement of the descending portion of the facial nerve towards the surface of the mastoid process, which throws some light on this question. The facial crossed the upper part of the tympanic sulcus, with the posterior periphery of which its further course formed an acute angle downward and forward. The sulcus was very oblique, without marked vertical inclination. Streit attributes to this latter condition the displacement of the nerve into the posterior wall and advises a certain caution in removing the posterior wall, if the plane of the *Mt.* is *very oblique.*

B. A. Randall (Arch. of Otol., 1903, p. 144) from his mensurations of a great number of skulls, came to a somewhat different conclusion, *viz.*, that the descending course of the facial nerve to its stylomastoid exit is, in all cases studied, almost exactly vertical, and crosses the oblique plane of the *Mt.* some 3 mm. back of the middle of the posterior margin of the annulus. Therefore, in removing the back wall of the meatus we should aim to cut a little below the tympano-mastoid suture if we would keep in safe territory.

Schwartze recommends the following *precautions,* with regard to these abnormalities: Careful slight strokes of the chisel, which must form an acute angle with the posterior wall, never a right angle. Then the facial cannot be cut perpendicularly. The chisel must act as bone knife, not as lever, and only with the center of its groove for removing the bone in lamellæ.

Stacke, however, (Die op. Freileg. d. Mittelohrräume, p. 191. 193) concedes that facial paralysis may be unavoidable in caries of the Fallopian canal. In such cases, in concordance with Schwartze (A. f. O., 57, 1903, 96), Moure and Liaras (A. f. O., 49, 1900, p. 86), Stewart (A. f. O., 46, 1899, p. 59), Panse (A. f. O., 58, p. 190), (45, 1898, p. 124) and others, he does not shun a lesion of the nerve, in the interest of removing all diseased parts.

These conditions I found in the following cases:

March 16, 1901, M. R., a man aged 43, came to me on account of very profuse purulent discharge from right ear with excruciating headaches on the same side. The otitis media had developed five weeks ago after influenza. Perforation at upper posterior quadrant of *Mt.* through which a granulation projects, pus coming from above. Mastoid not swollen, nor painful. Bone at posterior portion of annulus tympanicus feels rough. The muscles of the corresponding side of the face show lack of energy.

March 17. Opening of mastoid, which is filled with granulations. Perforation of Mt. enlarged and granulations removed. The patient felt greatly relieved and had no headaches. March 22, at the first dressing, the mastoid wound was clean, but the ear contained pus and he had some pain in ear, neck and jaw. There was no open communication between ear and mastoid. The wound was dressed every day, but since the discharge from ear continued, the *radical operation* was performed March 26. The lateral wall of aditus and the innermost portion of meatus formed a loose large sequestrum, which showed the lateral half of the facial canal. Behind it, quite an accumulation of pus had taken place. The tegmen tympani was healthy. Complete facial paralysis, although no twitchings were observed during the operation. Undoubtedly it was torn by the sequestrum when this was extracted. At the dressing the next day not a drop of pus was found. Everything went well until, on April 4, the patient suddenly complained of pain in left leg during the night, had a chill at 10 A. M., and severe headache, temp. 99.5°. In the afternoon he lost consciousness and presented the picture of an acute purulent lepto-meningitis, of which he died the next evening. A post-mortem examination was not allowed.

As all the diseased parts had been removed, the apoplectiform fatal meningitis was very likely metastatic, analogous to a great number of similar cases published by Ray, Panse, Knapp, Abbe, Kretchmann, Koerner, Zaufal and Pifll (A. f. O., 51, 1901, p. 172).

Second case: A. P., aged 17, came to me January 5, 1893, with chronic purulent otitis media and polypi of left ear, caries of mastoid with intense swelling and fistulæ, severe pain, fever, and occasional twitchings in the corresponding side of the face. At the operation the following day, a very large and deep cavity, filled with granulations, was opened. The posterior wall of the meatus was necrotic and had to be removed, which resulted in complete paralysis of the left facial. Good recovery.

January 27, 1894: he can close the left eye, but, on irritation of the conjunctiva, it weeps more than the right eye, which showed a restoration of the lacrimal fibers of the facial nerve.

With regard to the *symptoms of facial paralysis* only a few remarks may be permitted. Obliquity of the *soft palate* is no evidence of facial paralysis, as it is not uncommon in persons who have no facial palsy. Gowers, *e. g.*, never observed a corresponding defect of movement in the palate, and from the physiological and pathological investigations of Vulpian, Lermoyez, Réthi, Eulenburg, and de Pouthière, we know that the palate is innervated by motor branches of the 5th, 10th and 11th nerves.

The *pain in the face*, generally felt after the onset of facial palsy, was formerly attributed to assumed sensitive fibers of the facial nerve, but is now ascribed to a simultaneous, probably neuritic, affection of branches of the 5th nerve. (Oppenheimer, Hammerschlag, A. f. O., 45, 1, Hofmann, and v. Frankl-Hochwart.)

When the facial nerve is diseased between the origin of the chorda tympani and the geniculate ganglion, *taste* is lost in the anterior part of the tongue on the affected side. From recent studies in the clinic of Koerner, Schlichting (A. f. O., 49, 1900, p. 297) concludes that the chorda fibres of taste in the anterior part of the tongue, show an individual variation of occupying one-third to four-fifths of the area of the tongue. The posterior part of the tongue and the soft palate are supplied from the tympanic plexus. All nerve fibers that conduct the sensation of taste to the center, pass through the tympanic cavity, no matter whether they finally reach the brain through the 5th or 9th nerves.

When the facial nerve is affected at or above the geniculate ganglion, the secretion of the *lacrimal gland* ceases. Goldzieher (A. f. Augenh., 28, 1899) has shown that the facial nerve innervates the lacrimal gland by fibers which course in the large petrosal nerve (to the spheno-palatine ganglion, by the subcutaneous malæ of the 2nd branch of the 5th nerve, and the constant anastomosis with the lacrimal nerve to the lacrimal gland), and causes reflex and emotional weeping, while the normal moisture of the surface of the eye is secreted by the conjunctiva.

Tribondeau (Jour. de Med. de Bordeaux, 1895, N. 44), by cutting the facial nerve in animals, proved that it is the only innervator of the lacrimal gland, and his results were confirmed by Laffay.

Facial paralysis occurring during an operation, is generally not noticed as long as the patient sleeps, both eyes being equally closed. Herzfeld (Berl. Klin. Woch., 1901, p. 904) maintains that closure

of the lids during sleep is not always brought about by active contraction of the orbicularis, but passively by relaxation of the tonus of Müller's muscles and the smooth muscular fibers of Tenon's capsule, both supplied by the sympathetic nerve, analogously to the contraction of the pupil during sleep from relaxation of the dilator, which is also supplied by the sympathetic.

As to the *prognosis of facial paralysis* after operation, there is some discrepancy of opinion. According to Lermoyez (Thérap. des maladies de l'oreille) a paralysis immediately following an operation is incurable, that occurring after one or a few days is caused by grazing the nerve with the instruments, or pressure from blood or wound-secretion, or too tight packing, and is curable (Koerner observed this in 3 cases, also Gruening, Bacon, Dench), while Stacke says that a facial paralysis created by sharp instruments is very rarely irreparable. Out of his 100 radical operations published in his book, facial paralysis occurred in 4, but was cured in all; among Moure's (Centralbl. f. Chir., 1897, p. 110) 34 operations, it occurred 4 times and healed in all. Castex (A. f. O., 49, 1900, p. 278) observed restoration in 3 out of 4 cases (Barnick (A. f. O., 42, p. 112). Botey (A. f. O., 45, p. 73). Schroeder (A. f. O., 49, 1900, p. 21) had, out of 130 ossiculectomies facial paralysis twice, which, like in all cases previously published, recovered in about six weeks without treatment. He thinks that the paralysis is caused by infection.

A certain prognostic information on facial paralysis in general is obtained by electricity. If at the end of 10 days, the irritability of the nerve is not below normal, the face will probably be well in a few weeks. If, on the other hand, at the end of a fortnight the irritability of the nerve is absolutely lost, the paralysis will certainly last for several months (Gowers, p. 346).

The *treatment* of facial paralysis from ear disease coincides with the treatment of the latter, and, as shown above, must be chiefly surgical, aided by electricity, if there is no contracture. Brieger (A. f. O., 49, 1900, p. 284) observed 9 facial paralyses in 169 radical operations. One case illustrated the possibility of regeneration of the nerve six years after it was cut in simple opening of the antrum, by totally removing all diseased parts and thus curing the affection.

I may here mention the following case which I described in the Arch. of Otol., 24, N. 4: A man, aged 26, had a large cholesteatoma of the right middle ear and posterior cranial fossa, with complete facial paralysis. Radical operation Nov. 1, 1898. The inner portion of the posterior wall of the meatus formed a loose sequestrum which exposed a semicanal, apparently the lateral portion of the Fallopian canal. The after treatment, up to complete epidermization, lasted 6

months. The facial paralysis was cured; he can close his right eye completely, but the folds of the face on that side are not as deep as on the other.

For *incurable facial paralysis* Faure and Furet devised, in 1898, a new treatment by uniting the distal end of the facial with the external branch of the spinal accessory at its entrance into the sterno-cleido-mastoid muscle. This method has been further pursued by Kennedy, Breavoine (Centralbl. f. Chir. 1902, p. 796) Korte, Cushing, Frazier, Spiller, who favored the hypoglossal nerve, Ballance and Stewart (Prog. Med., March 1, 1904). The results were restoration of the normal muscular tone, improvement in the symmetry of the face, and restoration of voluntary control of various individual muscles.

Discussion.

Dr. Henry B. Hitz, of Milwaukee: In regard to this matter, our interest largely centers on the operative procedures in connection with middle ear disease—operative procedures that may result in injury to the facial nerve. This occurs in a comparatively small percentage of the cases operated on; still it occurs too frequently, and is very frequently the result of too hasty operative procedure. There are instances, however, where the anomalous course of the nerve makes it difficult to avoid injury, if all of the diseased structure is removed.

In operating upon a considerable number of these cases, I have been very fortunate in having had only one case of paralysis, which occurred quite recently. The result in this case was unquestionably due to a hemorrhage that occurred in the Fallopian canal. I unquestionably approached the facial nerve in the posterior wall of the meatus very closely, having removed several branches of an artery that apparently accompanied the nerve. There was at no time any twitching of the face, which is supposed to be the symptom that usually shows when the nerve is closely approached. The man I have in mind was exhibited before the Milwaukee Medical Society, and I am thankful to say that at the present time he is beginning to recover from the effects of the injury. The process usually takes from a month to six months for complete recovery. In many instances, however, the recovery from paralysis is never complete.

There are two small points to which I should like to call attention, in avoiding the facial nerve: First, the posterior wall should never be attacked as if it were a block of wood. In my opinion a chisel is the only thing to use, because it is absolutely under control, and in chiseling (as the best authorities suggest) very thin slivers of bone should be taken, and off the corners or edges, rather than in large blocks. By observing this, the danger of inflicting injury to the nerve is minimized. By chiseling away large masses of bone serious injury may be done not only to this nerve but to other delicate organs.

In a number of cases I have exposed the facial nerve and had absolutely no symptom of paralysis; in one case I exposed it for fully a quarter of an inch without any bad after-result.

Another frequent cause of paralysis in acute cases is the neglect of early operative procedure. I had my attention called to this quite recently in the case of a young woman who had refused operation some three weeks before, and the condition had gone on until it had become quite a serious problem. She was operated upon quite recently and the face was watched very carefully for twitching to indicate near approach to the facial nerve. The whole of the mastoid was exenterated, scooped out with a spoon, but great care was exercised in working in the direction of the facial nerve and lateral sinus, which proved very fortunate, inasmuch as the inner table covering the lateral sinus was softened and entirely removed by the gentlest manipulation.

When seen the following day the patient showed that there had been near approach to the facial nerve, in so far as there was occasional twitching of the face. There was no paralysis, however, and the condition subsided in a comparatively short time.

Dr. J. A. L. Bradfield, of La Crosse: It is very hard to discuss this subject without entering a little into mastoid cases. The doctor has given us a very good paper; I think no one should attempt an operation on the ear until he thoroughly understands the anatomy, and especially the course of the facial nerve. When the nerves take the normal course the operation is done with comparative safety, but when there is severe necrosis or deviation from the normal course of the facial nerve, it is difficult to avoid it, and one should be thoroughly acquainted with anatomy before attempting deep operations on the ear.

In all cases of acute facial paralysis the ear should be thoroughly examined to find if there is any involvement of the middle ear. Where there is an acute otitis media with pressure and the involvement of the facial nerve, an early surgical procedure will give relief and save a great deal of later trouble.

In operating upon the chronic cases which require a deep operation, if we remember to make our incision as has been suggested, by small shavings, and take a corkscrew course so as to avoid all the lower portion of the posterior wall, coming into the middle ear in the superior portion, there will be very little danger of wounding the facial nerve.

If we would be a little more careful during these operations and test for the facial nerve with the electric current, we would avoid some of the cases where we otherwise have trouble.

During the past year I had a case that was very interesting from the fact that it was quite questionable at first sight whether or not there was cerebral involvement. It was a case of long standing; there was deafness and in the beginning a large cholesteatoma; this I removed, which scattered the immediate symptoms, but headache and low temperature succeeded. About two weeks later I operated very carefully, demonstrating to students how to avoid the facial nerve; the evening after the operation the patient said she noticed a peculiar feeling about the mouth, and next morning she had well developed facial paralysis. In spite of the use of electricity for some weeks, facial paralysis continued without improvement, but ultimately the patient entirely recovered. In this case I think the trouble was due to a swelling in the Fallopian canal.

INTERNAL MEDICATION IN INFECTION OF THE BILIARY PASSAGES.*

BY F. D. BROOKS, M. D.,

MILWAUKEE.

The day of the appendix has waxed and reached its noon. When now the practitioner wishes judgment on the fresh case in hand which somehow is obscure or different or puzzling, what a wealth of experience he has before him. Volumes from his own land, or the fatherland lie smiling at his ignorance. Each says: "In this way only lies success." By only two roads can the practitioner emerge from danger, with his patient, some say by only one. For the time being we will assume there are two. By operation, immediate or at the interval, the surgeon's view point; or by medication, the sometime only remedy at hand, no surgeon being available. Some of these latter cases have recovered, we shall never know how many, for appendicitis was called by another name up to a very few years ago. Also some—how great some, the better kept records of to-day show but no small number—have died with operation.

I am not discussing appendicitis this evening, however, nor arguing for or against immediate or late operation, or no operation, but seeing a like history in the making—if not already made—for the gall-bladder infections, it seems a proper subject for consideration for this society.

Mayo Robson of England, Ochsner, the Mayos and others of this country, have demonstrated a certain freedom from risk the surgeon incurs in his work on the gall-bladder and its passages. They are fearless and skillful operators, but is not the frequency of operations unnecessary and is it not possible to disinfect a gall-bladder and its passages as readily and surely as it is to destroy pathologic bacteria in the urinary tract?

For the sake of discussion we will assume that disinfection can be accomplished by medication.

The etiology. Bierring, in a recent article (*Journal of the Amer. Med. Assoc.*, Oct. 15, 1904) considers the gall bladder one of the most vulnerable points of infection in the abdominal cavity, analogous to the appendix and the Fallopian tube. The sterile bile becomes a culture medium for micro-organisms, this difference being noted: that in the case of the gall bladder the contents become infected, whereas the walls of the appendix are attacked in infective processes.

*Read before the Milwaukee Medical Society, Nov. 22, 1904.

In the majority of cases the bile is free from micro-organisms during health, especially true is this of the gall bladder, the cystic and hepatic ducts, while the common duct usually contains a variety of micro-organisms. Fraenkel and Krause in 130 autopsies found it sterile in 105, and in 11 cases of gall stones it was free in 5 cases. Mikuliez in 23 operative cases found micro-organisms in 18, in 5 others sterile. There are observations to show that the typhoid and colon bacilli, streptococci, and staphylococci, which are normally present in the intestine, develop well in bile. Talma regards bile as only mildly bactericidal. Futterer and Lauriac found living typhoid bacilli in the gall bladder months and years after an attack of the disease. Infection may occur in two ways: by the blood, or by the common duct, this last being the common way observed clinically. The rôle of gall stones in promoting infection of the gall bladder is contributory only, as they may lie in the gall bladder a life time, causing no symptoms unless the bile becomes infected.

"Gall stones are not always present in cholecystitis and may exist without inflammation (Bierring, *ibid.*). Predisposing causes are age, sex, constipation, indolence, indolence, high living. Women are more often affected than men: some claim as 3-1, others 5-1. Two classes of men are affected—perhaps they are one, the obese and the glutton. The nucleus of a stone is composed of bacteria or the results of infection of the gall bladder mucosa (Bierring)."

Chemically, gall stones consist of calcium salts with bilirubin and cholesterin, and of the salts carbonates and phosphates are the most common. Naunyn says that cholesterin is a product of the epithelium of the bile passages. It occurs in the blood and various organs of the body and is present in the bile from .05 to 1.5 per cent.

According to Parker Syms (*Journal of the Amer. Med. Assoc.*, Oct. 15, 1904) one adult in every ten is the subject of gall stones; a larger proportion of cases, however, present such vague symptoms, or symptoms so little understood, that a diagnosis is not made. The symptoms produced by gall bladder disease are: pain, tenderness, fever and chills, vomiting, change of pulse rate, collapse, tumor, jaundice, urinary and blood changes, changes in the stools. Kehoe claims that pain is caused by inflammatory changes; Murphy, Ferguson, and others, that it is due to effects of stone.

Tenderness is at the Mayo Robson point, at the junction of the upper one-third with the lower two-thirds of a line drawn from the ninth rib to the umbilicus. Fever and chills are septic in character. Vomiting is a frequent symptom at the onset. The pulse is accel-

erated and tension altered—usually increased. According to Robson, collapse may be so complete as to mask symptoms, and the pain so agonizing itself as to cause death. Jaundice may be present or absent according to the degree of obstruction. There is bile in the urine and in the blood. Leucocytosis is present. Stools show presence or absence of bile as obstruction of the common duct is present or absent, or if the stone lies in the Ampulla of Vater there may be intermittent showing of bile in the stools.

As illustrating the beneficial effects of medical treatment, I will cite the history of one case only, which I select by reason of its severity, and the fact that operation was refused, forced me to render all possible aid by other means.

Mrs. M., 62, robust, short and fat, hardworking house-keeper. Was awakened early on the morning of January 25th, with violent pain in the right inguinal region, vomited, had a severe chill. I saw her three hours afterwards, found the patient with temperature of 103°, pulse 110, vomiting green mucous and water for the third time. She complained of intense pain in the appendiceal region for which she demanded relief. There was circular rigidity only over the appendix and great prostration; slight constipation had preceded the attack. She had already diagnosed her case as appendicitis, but informed me that I need not suggest any operation. If I could not cure her without the knife I was no good. She insisted on one dose of morphia, when, if that did not cure her she would abide my judgment in the further treatment of the case. I administered ¼ grain morphia and 1-150 grain of atropine hypodermatically. My diagnosis was appendicitis with a mental query over the small amount of rigidity needed to make me sure. A few hours of relief was obtained from the opiate, when the nausea returned with vomiting of water taken into the stomach. Temperature was 104° in the evening, less pain at McBurney's point. All pain and rigidity had disappeared from the appendiceal region at the end of 24 hours. On the morning of the third day, after a restless night accompanied with profuse perspiration, there was slight jaundice, a constant pain and dragging through the right side over the liver and across the upper part of the abdomen—the right upper quadrant. There was great thirst, chilliness, temperature 103°. All food and drink was withdrawn at the end of the first 24 hours of the disease. Calomel, ¼ grain every hour until characteristic stools showed its effect, was administered, followed by a saline, and an ice bag was put over the liver. The case began to improve at this time both in the comfort of the patient and in the temperature curve. No water or nourishment was given by the mouth for seven days, the patient having a piece of ice covered with gauze to suck when the thirst was too urgent. The temperature was remittent in type with profuse sweats and rapid pulse. Bile appeared in the urine, leucocytosis was present. On the fifth day, high enemas of 2 oz. peptonoids were given every four hours in one-half pint of hot

water. This relieved the thirst to a degree. The jaundice became marked, but not sufficient to warrant the belief of more than partial occlusion of the common duct, while the absence of colic precluded calculus obstruction. The pain lessened and left only a tenderness to pressure over the gall bladder. The temperature at the end of the first week remained at 101° at night and 101½° to 102° in the morning, pulse 110 to 120. The patient looked a very sick person. On the tongue slightly cleaning at this time and the patient complaining of great hunger, we allowed one-half ounce of peptonoids by mouth alternately with 2 ounces of chicken broth every three hours, and diluted orange juice one ounce at a time at patient's request. On the ninth day after the first attack the patient had a rigor lasting over an hour and was delirious. The temperature went to 106°, the pulse 130. The patient vomited. 30 grains of quinine administered. Profuse sweats followed the fall of temperature to 99°, twelve hours later, and the eyes again showed jaundice which had nearly disappeared. All food and water were again taken away, and ice bags put over the liver. Nourishment given of peptonoids and chicken broth every four hours by enema. The fever from this time was septic in character—pulse, temperature and sweats. The patient had lost flesh rapidly. That my first diagnosis was changed from appendicitis to gall bladder infection after the first three days will be evident to those who have listened so far to the history of this case. That the second phase dating from the ninth day, indicated an alarming infection, no one will dispute. Suppurative infection of the gall bladder and passages, in part or whole, was present, pus appeared in the urine at this time. The patient was put upon a cachet containing five grains each of salicylate of soda, salol and betol, three times a day, with urotropin (seven grains) twice a day. The fourth day from the second attack return to liquid nourishment and fruit juices was made. No more vomiting occurred. The case ran for a period of four weeks more, with occasional slight exacerbations, which subsided quickly on starving for twenty-four hours. The urine cleared in two weeks. The pulse remained rapid for several weeks longer, but by April 15th, two months after the first attack the patient was discharged with instructions to take the cachets a week at a time every fourth week for three months. Six months later she said she had been well all summer and had done as much work as ever. She looked in good health, had lost thirty pounds.

The assumption that the internal treatment caused the subsidence of the symptoms and that there was an actual disinfection of the biliary bladder and passages is founded on the results of recent experiments by Kuhn of Carlsruhe, and Chauffard of Paris (*Semaine Medicale*, Vol. 24, No. 3, Abstract in *Journal A. M. A.*, Feb. 27, 1904).

Kuhn (*Münchener Med. Woch.*, No. 33, Vol. 51, Abstracted in

Journal A. M. A., Oct. 8, 1904), has reported that thymol, menthol and the salicylates are the only drugs out of a long list tested which displayed any efficiency in this respect without serious effects. Salicylic acid passes into the bile in large amounts, and even in comparatively weak concentration checks the fermentation of the bile. All the numerous tests resulted positively, and justify the assumption that the salicylates can be used for effectual disinfection of the biliary passages. Exhibition of the salicylates, therefore, in cases of cholangitis and cholecystitis is to be commended to the general practitioner. Further tests of a combination of two or more of the above mentioned drugs, seem to demonstrate a still more effectual action. Kuhn found that the gas producing power of the bile, derived from biliary fistulae, was very much reduced, when the subject was under the influence of the salicylates alone or combined with menthol or thymol. Bile from a biliary fistula exhibits progressive fermentation, but when the subject has been taking the above drugs, the fermentation is much less intense and subsides much earlier.

The effect of the drugs is not perceptible until after they have been duly absorbed, and it lasts for some time after the drugs have been suspended. Kuhn lauds his method of determining the gaseous products as an accurate test of the decomposition of a fluid. He regards it as a physiologic chemical test more delicate than chemical analysis. It would be difficult by the latter alone to recover the salicylic acid in the bile, while its fermentation inhibiting action is unmistakably apparent even with minimum amounts present. He adds a trifle of sugar, infects with some intestinal content, sets the vessel in the incubator at 37°, examining it at four hour intervals to note the production of gas. The results of the various experimental and clinical tests are tabulated, the findings all emphasizing that in the salicylates we have a powerful weapon at our command for combatting inflammatory processes in the biliary passages.

Among the subjects with biliary fistulæ treated with the salicylates was one whose bile displayed a gas forming power as follows: after addition of 1 per cent. sugar and infection with fecal material and incubation at 37°, the amount of gas in the fermentation tubes at the fourth, twelfth, twenty-fourth, thirty-sixth, and forty-eighth hours was, respectively, one, three, five, eight and ten cc. The same figures were found at every repetition of the test. On the other hand after sodium salicylate had been given the patient in one gramme doses every four hours, the amount of gas that formed was only 0.2, 0.3, 0.8, 2.5 cc. at corresponding hours. Aspirin displayed nearly as much efficiency.

While Chauffard believes in operating in infectious cholelithiasis, as routine procedure, he encounters cases in which operation is contraindicated. He dislikes to operate upon women between fifty and sixty who are chronically lithiatic, obese, the abdomen fat and flabby, the myocardium soft and below the norm, with tendency to varicose veins, and a little sugar in the urine. The organism has little resistence and the abdomen is a bad one for surgical intervention, while such patients can be cured by medical treatment. He argues that infectious *gall bladder disease* is comparatively free from the dangers surrounding an appendicitic one. It does not develop so insidiously, and the evolution toward suppuration can be detected. A still further difference between the two—mark the phrase—is that there is no effective medical treatment for appendicitis, while that for infective cholelithiasis is very promising.

"The first indication is to remove all food and water for twenty-four hours, then an exclusive milk diet; ice to the gall bladder region. The biliary passages are then sterilized by salicylic medication, for which he prefers sodium salicylate associated with betol (naphthol salicylate) and salol. He gives three doses in twenty-four hours. When the infectious symptoms subside he returns to systematic preventive medication with which he keeps the patients free from recurrence. He accomplishes this with sodium salicylate and sodium benzoate, or Carlsbad salts."

The results of treatment in the case cited, the assumption of Kuhn, that the biliary passages may be and can be disinfected by the salicylates, with the proofs of his experiments, the statements of Chauffard that he has succeeded in curing by medication his cases that he considered inoperative—all lead the internist to the logical conclusion that infected biliary passages, not occluded by stone, are to be treated by him with reasonable expectation of success, and that he is justified in taking the responsibility of such treatment.

SOME METHODS OF HOME MODIFICATION OF MILK IN INFANT FEEDING.*

BY A. W. MYERS, M. D.,

MILWAUKEE.

The modification of milk for feeding to infants is essentially a modern process, as the conditions demanding it result largely from the growing complexity of our civilization, and the scientific investigation of the principles underlying it had to await the development of modern methods of chemical and physiological research. In ancient times the human breast was the universal source of nourishment, either that of the mother or that of a wet-nurse, usually a slave. When for some reason this was not available the child was applied directly to the teats of some of the lower animals, after the manner still followed among primitive peoples even at the present time. For this purpose the goat was generally used, for in spite of the success obtained in the celebrated case of Romulus and Remus, the use of a wolf in infant feeding never became widely popular.

But maternal human nature was much the same then as now, and Soranos, writing in the second century of our era, mentions with condemnation the habit of some ignorant people who insisted upon giving additional food to infants under six months of age. And in a child's tomb of this same period a beaked feeding cup has been found evidently intended for use in early life.

Although the Ebers Papyrus shows that the Egyptians were acquainted with the use of cereal decoctions as useful diluents for milk given to children, no mention of this is found in European medical works until the 16th century, but it must be remembered that physicians paid very little attention to infant feeding until recent times, and it is probable that this method has the sanction of many centuries of use in domestic medicine. For over two hundred years after this date we find that the attempts being made to obtain a food approximating the composition of human milk were limited to simple dilution of cow's milk by the addition to it of plain water, barley-, wheat-, or oatmeal-water. In cases where cow's milk disagreed, ass's milk or animal broths were recommended.

*Read before the 58th Annual Meeting of the State Medical Society of Wisconsin, Milwaukee, June 23, 1904.

Less than one hundred years ago cream mixtures seem to have been used for the first time, and the celebrated "Meigs Mixture," which was the first to really approach closely the composition of human milk, is barely fifty years old. Sterilization had its first outspoken advocate in Jacobi, who has worked unceasingly in its behalf for over fifty years, and Pasteurization, as all know, is of even more recent introduction.

It would carry us too far to try to consider the causes which make the subject of milk modification of such importance to-day; we all know the great number of infants who for one reason or another cannot be nursed at the mother's breast; we all know too well the disastrous results of improper artificial feeding. We are all agreed that maternal nursing is the best method of infant feeding and I am sure we do not lightly deprive the child of this, its birthright. Possibly we are not all as persistent as we should be in striving to retain and improve a deficient or defective milk supply. The recent work of Southworth has shown how much can be done in this direction. But when the necessity for artificial feeding presents itself, we have a definite problem before us of a difficulty worthy of our best efforts. No one has stated this problem more clearly than Cheadle; let me quote his words:

"The six essential conditions to be observed in the diet of infants are these:

I. The food must contain the different elements in the proportions which obtain in human milk.

II. It must possess the antiscorbutic element.

III. The total quantity in 24 hours must be such as to represent the nutritive value of 1 to 3 pints of human milk, according to age.

IV. It must not be purely vegetable, but must contain a large proportion of animal matter.

V. It must be in a form suited to the physiological condition of the digestive function in infancy.

VI. It must be fresh and sound, free from all taint of sourness or decomposition."

Furthermore, this food must be simple and easily prepared, and it must be inexpensive, so as to be within the reach of all.

With fresh, clean cow's milk as a basis, it is possible to prepare a food which answers all these requirements, but to do this simply and accurately has not seemed easy. The medical profession owes a great debt to Rotch for his earnest work in the introduction of the

"percentage method" of feeding, but most physicians look upon this as a complicated affair. As a matter of fact it is not at all complicated, it is simply an expression in figures of what we are all doing every day of our lives in feeding babies, and its value lies in the fact that it causes one to consider carefully what one is attempting to do and how one is attempting to do it. It compels one to consider separately the different food elements in the milk and so ensures a reasonably proportioned diet.

The differences between the composition of the proteids of human milk and cow's milk will not be discussed as it would lead us too far from the point.

The great difficulty in attempting to prepare a modified milk lies in securing a proper relation between the proteid and the fat percentages, for the sugar percentage is easily managed. In the milk of the cow these food elements are present in nearly equal amounts, while in human milk the fat is between two and three times the percentage of the proteids. It is obvious that simple dilution of cow's milk will not affect this ratio for both will be reduced at the same rate.

Rotch attempted to overcome this difficulty by the use of creams of certain definite strengths; by the use of 8, 12, or 16 per cent. creams, he is able to prepare mixtures in which the relation of proteids to fats is as 1:2, 1:3, or 1:4. This method is open to several serious objections. In the first place the richness of cream in fat is extremely variable unless "separated cream" of definite strength is used. This is not obtainable in most places, and, besides this, if the cream has been centrifugalized the character of the emulsion is disturbed, and the fat forms into larger droplets which are less easily digested. The ordinary gravity cream of the household may contain anywhere from 12 to 30 per cent. of fat, so that anything like accuracy in feeding cannot be obtained by its use, and, in addition, the time allowed for the cream to rise often gives an opportunity for bacterial growth which may cause digestive disturbances. Then, too, the process seems complicated and expensive to the ordinary housekeeper.

The method to which I wish to call your attention to-day is simple and accurate, does not disturb the natural emulsion, and permits the use of the milk while it is still fresh, before the bacteria present have had time to bring about any of the changes of decomposition. It is the use of "top-milk," removed from the upper part of the milk bottle, preferably by a milk dipper which can be obtained for a very small sum.

At this point it may be objected that only in the large cities is milk delivered in bottles and that, therefore, this method has only a limited application. The reply to this objection is that it is no trouble to pour the milk into a clean quart bottle as soon as it is drawn; any milk man will do this for you; and the advantages are so great that it is well worth the small additional attention it requires. When the well-being of an infant is at stake a difficulty such as that cannot be considered for a moment, it must be overcome.

When milk is placed in a tall narrow receptacle like the ordinary milk bottle as soon as it is drawn, and is kept well cooled, the cream rises very rapidly, within four or five hours its separation is practically complete, and the cream is seen as a distinct layer occupying the entire neck of the bottle. If now the upper nine ounces are removed you will have a cream or "9 oz. top-milk" containing almost exactly three times the percentage of fat which was present in the original milk.

If the upper sixteen ounces are removed, that is, the upper half of the bottle, you will have a cream or "16 oz. top-milk" containing almost two times the percentage of fat which was present in the original milk.

Suppose the milk with which you are dealing contains 4 per cent. butter-fat, the top 9 oz. will show 12 per cent. fat with remarkable regularity, and the top 16 oz. will give a percentage between 7 and 8 with the same uniformity. If the milk has only 3.5 per cent. fat to begin with, the top 9 ounces will show 10.5 to 11.5 per cent. and the top 16 ounces will contain 6.5 to 7 per cent.

After standing this length of time, *i. e.*, 4 or 5 hours, the milk in the lower half of the bottle will contain only about .5 per cent. of fat.

Now a word in regard to the proteid percentage; in many of the text-books 4 per cent. of proteid is given as representing the average amount found in cow's milk. As a matter of fact this figure is too high. Taking thousands of analyses made by different observers in various parts of the country, it is found that the proteid percentage is rarely in excess of 3.6 and is usually in the neighborhood of 3.3 per cent.

In cream a small amount of the casein is displaced by the increased quantity of fat, so that in a 12 per cent. cream the proteid would not average more than 3.1 per cent, while in the 16 oz. top-milk, in which, as we have seen, the fat is in the neighborhood of 7 per cent., the proteids would be represented pretty closely by 3.2

per cent. as an average figure. From this it will be seen that the mixtures prepared according to the formulæ having 16 per cent. cream as a basis really give a ratio of proteids to fat of 1.5, or even 1:5.5.

In human milk the ratio of proteids to fat is about as 1:2 or 1:3. Suppose it is desired to prepare an artificial food for an infant in which the first ratio shall be present; all that is necessary is to take "16 oz. top-milk," which will contain approximately 3.2 per cent. proteid and 7 per cent. fat, dilute it and add milk sugar.

If it is desired to give a mixture containing a lower proteid percentage, "9 oz. top-milk" may be used; this will contain 3.1 per cent. proteid and 10.5 to 12 per cent. fat, a ratio of 1:3.5 or 1:4. Again all that is necessary is dilution and the addition of milk sugar.

Nothing could be simpler, and yet these give you mixtures representing very closely the chemical composition and nutritive value of human milk.

It must be understood that to get uniform results the whole 9 oz. or the whole 16 oz. must be removed and stirred together. If you tell the mother to use three ounces of top-milk in preparing one bottle for a child who is beginning to take a supplemental feeding, she may remove *only* the top three ounces from the bottle. This would contain over 20 per cent. of fat and the child would soon begin to vomit the food. Even if only three ounces are to be used the entire 9 oz. or the entire 16 oz., as the case may be, must be removed and stirred together; that will give you the top-milk of the strength desired, and from that as much may be taken as is needed for use.

It is not claimed that this method is original; much has been written about it by Chapin, Freeman and others, but still it is not as widely known as it deserves to be.

In order to make sure that the composition of the various top-milks, as shown by the analyses made in New York and elsewhere, did not differ materially from the results obtainable here in Wisconsin, a large number of analyses were made showing the richness in fat of the various portions of the bottle.

The analyses showed that it is possible to obtain the desired strength of cream or top-milk by this method with great ease and with remarkable uniformity. To give you a few of the figures: it was found that taking good mixed herd milk, obtained from various sources, the average fat percentage for the whole series being 3.83, the top 6 oz. averaged 16.85 per cent. fat; the top 9 oz., 12 per cent.; the top 10 oz., 11 per cent.; the top 16 oz., 7.15 per cent.; and the

lower half of the bottle, or the skimmed milk, 0.51 per cent. These figures are almost identical with those given by Chapin in his recent work on "Infant Feeding," and show that this useful and easy method of preparing milk-mixtures is perfectly adapted to our use.

SUMMARY OF RESULTS OF ANALYSES.

Top 6 oz., 16.85 per cent. Fat.	Top 10 oz., 11. per cent. Fat.
Top 7 oz., 15.2 per cent. Fat.	Top 11 oz., 10.15 per cent. Fat.
Top 8 oz., 13.3 per cent. Fat.	Top 16 oz., 7.15 per cent. Fat.
Top 9 oz., 12. per cent. Fat.	Lower 16 oz., .51 per cent. Fat.

Whole milk, 3.83 per cent. Fat.

Static Foot Trouble.—W. E. Blodgett (*Amer. Jour. of Orthopedic Surg.*, Oct., 1904), gives a report on the investigation of 1,000 consecutive cases. A large number of tables is given, and many of the conclusions are interesting to the general practitioner. Among the etiological factors he finds that long, slender feet and the occurrence of hallux valgus are predisposing causes. General factors are "mild, fleeting polyarthritic symptoms, probably toxemic: depression of physical vigor, without local symptoms except in feet, as shown by soft muscles, pale skin and mucous membranes, excessive complaining without effort at self-help and general indolence of body and mind." Patients of working class attribute symptoms at first to natural fatigue and only when a sudden increase of pain occurs, do they consult a physician. When pain is localized beyond the foot it is most commonly found in following order: calf, knee, back and hip. In nearly all cases observed, the anterior arch was somewhat affected. The degree of deformity is no indication of the severity of the symptoms: many cases presenting apparently normal feet were relieved by treatment of the inferred static error.

The larger number of cases were corrected by specially designed plates, with incidental strapping, manipulation and general tonic treatment. The results in the longitudinal and anterior arch deformity were practically the same: roughly one-third absolutely relieved, one-twelfth unrelieved and the remainder considerably improved. He attributes a large amount of the failure to a lack of intelligent co-operation on the part of the patient. The plate should be raised after a period to accommodate it to the increased height of the arch. The patient should be instructed in the proper method of standing and walking and an effort should be made to discourage the use of plates beyond the period necessary. (Hoyt E. Dearholt.)

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EDITORIAL COMMENT.

WISCONSIN—"FORWARD!"

Two recent decisions of the Supreme Court of Iowa mark the steady progress that is being made in protecting the public from quacks and charlatans. A new country like ours is slow to recognize the value of learning and special training; and laws fixing any educational test of capability are a laborious growth. It has been particularly difficult to make our legislators appreciate the meaning of exact scientific knowledge; and nearly all our statutes authorize the practice of so-called systems of healing that in the light of present knowledge are as reasonable as the theory of the earth as a place with the sun revolving about it. We have succeeded in diffusing knowledge

of cosmography so that there is no longer any possibility of legislation authorizing the teaching of the old colored preacher that "de sun do move"; and in time we may hope for a similar advance for medicine. The Iowa decisions mark a step forward by upholding laws which regulate not only professed practitioners of medicine or surgery, but also all who "publicly profess to cure or heal." Under these statutes the Court held that the requirement of examination and the obtaining of a certificate from the State Board of Medical Examiners applied to a so-called "magnetic healer," although he did not pretend to use medicines or to resort to surgery (State vs. Heath, 101 N. W. Rep. 429); and the Court further sustained a conviction for practicing as an itinerant physician without a license in the case of a traveling healer who professed to effect cures by dieting his patients, causing them to take certain exercises and to wear glasses which he furnished. (State vs. Edmunds, 101 N. W. Rep. 431).

Noteworthy is the broad view taken by the Court in holding that "undoubtedly the State has the right to determine what acts shall constitute the practice of the healing art, and it may impose conditions on the exercise of that privilege"; and further that "while the practice of medicine is often spoken of as a right, it is not, strictly speaking a right, but a mere privilege, upon the exercise of which the state may impose conditions such as it deems advisable."

This doctrine would permit the most complete supervision and regulation of the practice of medicine. The decisions refer approvingly to the provisions recognizing various "schools of medicine." Undoubtedly we shall have to increase materially the knowledge of our legislators, before we shall be certain that any new fad or empirical scheme of treatment which can muster sufficient adherents to employ a lobbyist, shall not obtain legislative recognition as a school of medicine.

THE PURE MILK PROBLEM.

In the Fifteenth Annual Report of the Storrs' Agricultural Experiment Station, Professor H. W. Conn, of Wesleyan University, described in detail his attempts to produce a sterile milk. After careful cleansing of the flank, side and udder of the cow, and of the milker's hands, about half of the milk was removed and the cleansing process of both udder and hands was repeated with the utmost care. The milker then drew the remaining milk into a sterilized covered pail through four thicknesses of sterilized cheesecloth and

a layer of absorbent cotton. "Of nine samples of this milk, when freshly drawn, the average bacterial content was 242 per cubic centimeter." After standing twenty-four hours at 50° Fahrenheit, this same milk gave an average count of 358 per cubic centimeter, according to Newton.

This result agrees with the work of others who have gone over the same ground, and it must be accepted as true that we cannot at present hope to obtain a market milk entirely free from bacterial life.

We then have to face the problem: How can we most effectively limit the bacterial contamination of milk?

The answer to this question has been expressed in very brief terms by Hill and Slack (*Boston Medical and Surgical Journal*, December 29, 1904): they describe it as being "the two C's—Cleanliness and Cold."

What can be done in the way of producing pure milk by the intelligent use of cleanliness and cold is well demonstrated by the report of the Milk Commission of the Milwaukee Medical Society, which appears on another page of this issue. During the past six months the milk certified by the Commission has averaged only 336 bacteria per cubic centimeter at the time of its delivery to the consumer, a showing which compares most favorably with Conn's experiments.

While results like these can be obtained only with the most improved equipment, the report of Newton (*Journal of the American Medical Association*, November 5, 1904), shows that "the poor farmer, with his three or four cows, will no longer labor under insurmountable difficulties when competing with elaborate and richly stocked dairies." By the use of a covered pail with sterile cheesecloth diaphragms, frequently changed, and by promptly cooling the milk below 45° Fahrenheit, milk up to the high standard required by the Milk Commission can be produced even in old fashioned, dusty barns, if intelligent care is exercised.

In the ordinance creating the Bureau of Milk and Food Inspection of the Milwaukee Health Department, milk is condemned "if it contains more than 250,000 bacteria to the cubic centimeter." The limit of 500,000 fixed by the Boston Board of Health is probably necessitated by the greater distance the milk has to travel. This is a step in the right direction, but it is open to the objection that it would not prevent the use of a badly contaminated milk in which the bacterial growth had been temporarily diminished by pasteurization. Now that simple tests are available by which raw milk can be

easily distinguished from milk which has been subjected to heat, it would seem desirable to add to the clause defining the bacterial limit, the words: "before being subjected to heat."

Pasteurization has a distinct field of usefulness, but it is probable that few of the customers of the Boston milkman, who boasted that this process reduced the bacteria count of his milk from 7,000,000 per cubic centimeter to 4,000, realized that they were consuming in each teaspoonful of the milk the dead bodies of 28,000,000 bacteria, together with the products of their life activity.

WISCONSIN AND ITS EPILEPTICS.

At the recent meeting of the Association of Trustees and Superintendents of County Insane Asylums of Wisconsin, held in Milwaukee, "the committee appointed to confer with the State Board of Control in relation to the matter of asking the legislature to provide a suitable building and equipment for the care and keeping of the epileptic and violent and criminal insane," reported as follows: "It is the opinion of the State Board, of Dr. Gordon, and of your committee, that this association should through its legislative committee urge upon the legislature this coming winter the necessity and wisdom of making a sufficient appropriation for the building, equipment and operation of an addition to the Northern Hospital of sufficient capacity to take care of the violent, criminal and vicious insane."

Since no mention is made in this resolution of the epileptic and epileptic insane, we presume that no legislation looking toward proper provision for this class of unfortunates is contemplated, unless it be that the epileptic insane are assumed to be either "violent, criminal, or vicious."

We look forward to the time when this state shall make proper provision for epileptics of all classes. When this time comes there is little doubt that it will be found advisable to have an insane department in connection with a colony for epileptics. If we bear in mind the frequency with which mental disorders are associated with epilepsy, it would seem an extravagance, aside from being a very decided inconvenience, to have to transfer patients to a distant institution upon the appearance of mental disturbance. In some states in which colonies for epileptics have been established, notably in New York, it is true such transfers are made, but it seems to us to be neither economical nor wise.

We would suggest that while the above mentioned committee is

looking after the interests of the violent, criminal and vicious insane, it would be doing the state and its epileptic unfortunates a decided service by also advocating the establishment of a colony for epileptics on the lines indicated.

THE INCREASING PREVALENCE OF PNEUMONIA.

Much has been written of late concerning the increased prevalence of pneumonia and the increasing ratio of deaths from this disease. We see this not only in the medical journals of the day but also see references to the fact in the lay press.

State medical societies and state boards of health have instituted inquiries into the causes of this condition of affairs, and commissions have been appointed by municipalities with the same object in view. At the present time a commission of the leading medical men of the country has been appointed by the City of New York, and it is intended that the investigation to be pursued by it shall include an inquiry as to the prevalence of this disease in all the large cities and hospitals in the country.

The fact that pneumonia is an infectious disease has long been known, but much remains to be learned of the laws that govern its incidence, and influence its prevalence in localities and in buildings.

This increased prevalence and mortality suggest a few reflections.

Ten years ago the total number of deaths in Milwaukee was 4,253 (1894), the total population being 245,000. In 1903 the total number of deaths was 4,091, the population being 315,000. In 1894, 75 per cent. of the deaths (3,171), occurred in persons under the age of 40 years. In 1903, 57.18 per cent. of the deaths (2,339) occurred in persons under 40 years of age. Hence it follows that in 1894 there were 1,182 deaths in persons over 40 years of age, whereas in 1903 there were 1,752 deaths in persons over 40 years of age.

It is a law of nature that all living things must die. Those individuals who do not die before they reach the age of 40 years must die afterwards. It is manifest that they will not die of the diseases of infancy and young childhood, but will and must die of those diseases specially prevalent after the period of middle life.

Among these diseases may be mentioned the following: Arteriosclerosis, myocardial affections, pneumonia, cancer and diseases of the nervous system; and if we consult the current literature of the day we shall note that there is a great and rapidly growing increase in the prevalence of these diseases and the mortality therefrom. This

may, a priori, be expected. It is merely the inevitable. Six years has been added to the average age of man in the last decade—a truly marvelous fact—and much is expected in the future.

Old age is now being regarded by some as a disease, and men are already at work on the problem of its prevention.

If, however, we are to judge the future by the past, there will be a gradual increase in the average age of those living; there will be a gradual lessenin~ of the birth rate; there will be a gradual lessening in mortality among infants and young children; a larger proportion of those born into the world will reach adult age; but there will continue to be an increase in the prevalence of, and mortality from, those diseases peculiar to advanced years.

PSEUDO-SCIENTIFIC BUNKUM.

The December issue of the Northwestern Sportsman in the Physical Culture Department ("edited" by Wm. Lachenmaier, a gymnast who was appointed by Gov. LaFollette as a state representative to the recent International Congress of Tuberculosis) contains the following literary and scientific gem which we reprint for your edification:

"The question of vitality as sustaining life is of momentous importance, and this fact should ever remain paramount in the mind of the individual. Life exists in every organism in the form of vitality, and is the very spring and impulse of health. We have within us that which lives. This piece of life is only a part of the great pulsing power of the universe, of the sun, if we wish to speak the truth, although the sun is the embodiment of a still higher power. If the life within us should die, it would find some new matter with which to attach itself and then prove that dying is merely a change. The accumulation of vitality in the system will increase life, for it is not a stimulant to life, but life itself, consequently increase life instead of consuming it as stimulants and medicines do. This accumulation of vitality will guard the body against disease, insuring health and longevity. To lower the vitality, which may become dangeronsly so in one day, is as certain to insure illness, utter collapse and ultimately death; for the system with the low vitality, is susceptible to all the prevailing diseases, whose bacilli permeate the entire system until such time as it becomes a very hotbed, conducive to the propagation of these germs by the millions, materializing into an acute form of this or that disease."

Space and the postal authorities prevent the comment which is suggested by the realization of the impotence of the profession to suppress, under the present law, the advertising claims and practice of this unlicensed specialist in orthopedics and diseases of the chest.

CARBOLIC ACID AND SUICIDE.

The many cases of poisoning by carbolic acid reported in this city during the past month, again bring the question of the indiscriminate sale of poisons before us. Attention was called to this matter in these columns on a previous occasion, but now that these cases have occurred in such large numbers in our own city, the public has been roused to a consciousness that the fault lies in a laxity of laws governing the sale of poisons by the druggist. Opium, a drug not nearly so speedily fatal even in very large doses, and for which in cases of poisoning there are antidotes that are often effectually used, is not dispensed by the druggist with the same degree of readiness as is carbolic acid.

Our state laws permit the sale of all poisons under certain restrictions; but for any one desirous of being put in possession of a drug, the purchase is readily effected. Our laws ought to be so framed as to permit the dispensing of these drugs only upon proper medical authority, and in this way only can some supervision be exercised. Such a restrictive measure would undoubtedly lessen the number of suicides in this country.

NEWS ITEMS.

Annals of Surgery.—The December issue completes the 40th volume of the Annals, and the editors have prepared an anniversary number, containing nearly double the average number of pages and numerous illustrations in black and colors. This Festschrift commemorates the close of a successful career of twenty years, during which period the Annals has maintained the position of the best exponent of surgery in this country. This issue contains articles by surgeons at home and abroad, all of whom may be looked up to as authorities in their respective fields. They are: Prof. Orth, of Berlin; J. William White, of Philadelphia; W. Watson Cheyne, of London; Prof. J. Collins Warren, of Boston; Foxworthy, of Indianapolis; Brewer, of New York; Nicoll, of Glasgow; Dyball, of Exeter, England; Alessandri, of Rome, Italy; Warbasse, of Brooklyn; Mayo, of Minnesota; Scudder, of Boston; Shepherd, of Montreal; Germain, of Boston; Fowler, of Washington, D. C.; Drs. Odione and Simmons, of Boston; and Dr. Francis S. Watson, of Boston.

The articles cover a wide range of surgery in a most satisfactory manner. The editor and publishers of the Annals are to be heartily felicitated upon their achievement.

The Western Surgical and Gynecological Association held its 14th annual meeting in Milwaukee, Dec. 28, 29, 1904. There was a large attendance

and many papers of great value were presented. The Wisconsin members of this association are Drs. Oviatt, Sifton, Walbridge, Sayle, Mackie, Kletzsch and Minahan.

The State Board Overruled. —The action of the State Board of Medical Examiners in refusing to recognize the diploma of Dr. A. Budau, a graduate of Harvey Medical College, Chicago, for license to practice in Wisconsin, has been overruled in a mandamus suit brought before Judge Tarrant.

Harvey Medical College of Chicago, was again investigated by a committee of the Wisconsin State Board of Medical Examiners, who recommend that the Board continue to refuse recognition to graduates of this institution, thus making them ineligible for examination by the Board.

Dr. George W. Harrison, of Ashland, died at Grand Rapids, Mich., Jan. 13. He was a graduate of Rush Medical College, 1881, and at one time a member of the State Board of Health and State Board of Medical Examiners.

Drs. W. A. Gordon and G. E. Seaman have been appointed members of the Committee on Public Policy and Legislation of the State Medical Society, the former acting as its chairman.

State Board Examination.—Twenty applicants appeared before the State Board of Medical Examiners at the regular examination held in Milwaukee, Jan. 10, 11 and 12.

The Chicago Ophthalmological and Otological Society at its January meeting elected Dr. H. V. Würdemann, of Milwaukee, as vice-president.

Dr. A. G. Leland, of Whitewater, died December 25, 1904, at the age of 74. He was graduated from the University of Buffalo in 1875.

Dr. Gilbert E. Seaman has resigned as Assistant Health Commissioner of Milwaukee, after a long period of service.

Dr. J. W. Cairncross, of Wauwatosa, died December 21, 1904, aged 53 years.

Dr. B. G. Jurgensohn, of Manawa, died December 19, 1904, of heart failure.

Dr. W. E. Wray has removed from Minocqua to Tomahawk, Wis.

Dr. J. B. Stair, of Lake Mills, died December 20, 1904.

FIRST ANNUAL REPORT OF THE MILK COMMISSION OF THE MILWAUKEE MEDICAL SOCIETY.

The Milk Commission appointed by the Milwaukee Medical Society at its meeting of November 25th, 1902, held its first meeting and effected a permanent organization, January 13th, 1903.

Circular letters setting forth the objects and methods of the Commission were given as wide a circulation as possible, in the hope that a number of the milk producers might become interested in the cause of clean milk. No responses were received except from Mr. F. A. W. Kieckhefer, proprietor of the Edgewood Farms, situated at Pewaukee Lake, Waukesha Co., Wis., with whom the Commission later made a contract for the production of Certified Milk and Cream.

The contract for the production of certified milk, which was signed by Mr. Kieckhefer early in 1903, is similar to those made wherever Milk Commissions have been established. It provides for sanitary buildings and surroundings, strict inspection of stock, pure water, clean food, and good care for the cows, frequent examinations of the milk, and such handling of the milk from the time it leaves the cow until it reaches the consumer as will reduce to a minimum the "initial contamination."

The chemical standards adopted at the beginning required from 3.5 to 4.5% of proteids. This was based on antiquated figures which have been shown to be too high, so a change was made. The fat percentage range in the original standard was from 4. to 4.5%; this proved to be too narrow and was also changed. The present standard requires that the milk shall range from 1029 to 1034 in sp. gr., be neutral or very faintly acid in reaction, contain 3 to 4% of proteid, from 4 to 5% of milk sugar, and from 3.75 to 4.5% of butter fat, and shall be free from all contaminating matter and from all addition of chemical substances and coloring matter.

In addition it must be free from pus and injurious bacteria, and must not have more than 10,000 bacteria of all kinds to the cubic centimeter.

It will be seen that no attempt has been made to secure an unusually rich milk, in fact this has not been desired; what is demanded is a good, wholesome milk, uniform in composition from day to day, and as far as possible, *absolutely clean.*

In regard to the certification of cream there was very little precedent to guide us, for this is almost new work. We have required

that the cream shall be produced and handled under the same conditions as those required for the milk; that it must contain a fat percentage within 2% of that stated on the label; and that it must be free from pus and injurious bacteria, and must not contain more than 15,000 bacteria of all kinds to the cubic centimeter.

In January, 1904, the plant of the Edgewood Farms was so nearly completed, that they wished to begin operations and the preliminary tests and examinations were made. As these were satisfactory, the issuance to them of milk and cream certificates was ordered by the Commission on January 19.

In the attached tables the results of the chemical analyses and of the bacteriologist's studies are given in full. It is a matter worthy of mention that even in the preliminary tests, before the work was running with perfect smoothness, the bacteria count did not rise to the limit set by the commission.

Bacteriologist's Report on Certified Milk and Cream.

MILK.	
1904	Total Bacteria Per cu. cm.
February 5	2370
February 17	800
March 1	1500
March 12	750
March 28	625
April 8	550
April 27	525
May 14	590
May 30	550
June 29	400
July 19	425
August 2	410
September 9	375
October 7	350
October 27	325
November 16	275
December 1	250
December 15	275
Average for year	630
Average last 6 months	336

CREAM.	
1904	Total Bacteria Per cu. cm.
February 13	1200
March 1	900
March 17	600
April 5	675
April 27	550
May 14	625
May 30	625
June 29	450
July 14	400
August 2	435
September 9	390
October 7	380
October 27	375
November 16	300
December 1	300
December 15	250
Average for year	528
Average last 6 months	354

MILK.

Date 1904	% Total Solids	% Fat	% Sugar	% Proteids	% Ash	Acid-ity
February 5.....	12.49	3.83	4.92	3.02	0.72	.173
March 1.....	13.34	4.10	5.10	3.41	0.73	.175
March 12.....	12.65	3.95	4.82	3.17	0.71	.176
March 28.....	13.52	4.20	4.75	3.83	0.74	.158
April 8.....	12.66	3.75	4.90	3.15	0.73	.158
May 2.....	13.08	4.05	5.10	3.19	0.74	.164
May 14.....	12.98	3.60	4.90	3.18	0.73	.173
May 30.....	12.43	3.80	4.95	3.	0.71	.160
June 27.....	12.63	3.78	5.10	3.02	0.72	.162
July 19.....	12.47	3.45	5.10	3.22	0.70	.160
August 1.....	13.23	4.20	5.06	3.24	0.73	.163
August 18.....	12.65	3.60	4.95	3.38	0.73	.196
September 8.....	13.52	4.15	4.75	3.88	0.74	.196
October 7.....	13.41	4.20	5.16	3.30	0.75	.159
October 26.....	13.44	4.15	5.21	3.33	0.75	.130
November 15.....	13.48	4.15	5.24	3.34	0.75	.160
November 30.....	13.60	4.40	4.93	3.50	0.77	.110
December 14.....	13.78	4.40	5.18	3.40	0.80	.110
Average %....	13.08	3.99	5.01	3.31	0.75	.160

16% CREAM.

Date 1904	% Total Solids	% Fat	% Sugar	% Proteids	% Ash	Acid-ity
March 1.....	24.64	16.13	4.92	2.95	0.64	.144
March 17.....	24.26	15.91	....	....	0.64	.160
April 4.....	24.52	16.72	4.40	2.76	0.64	....
May 14.....	23.76	15.95	4.38	2.75	0.62	.140
May 30.....	23.69	16.45	3.93	2.54	0.63	.140
June 27.....	27.30	19.30	4.75	2.65	0.60	.146
July 18.....	24.10	16.85	4.14	2.60	0.61	....
August 1.....	24.14	16.75	4.06	2.70	0.63	.155
August 18.....	23.83	16.10	4.46	2.65	0.62	.165
September 8.....	25.45	17.90	4.21	2.70	0.64	.129
October 7.....	25.54	19.73	2.74	2.35	0.62	.123
October 26.....	23.74	15.85	4.35	2.92	0.62	.128
December 14.....	25.51	16.70	4.98	3.12	0.70	.096
Average %...	24.65	16.95	4.28	2.72	0.63	.126

*Note—The analyses of the 32% cream are not tabulated on account of lack of space.

The bacteria count in milk should be looked upon as an index of the care and cleanliness exercised in the handling. It is most satisfactory to see that the average bacteria count during the last six months has been 336 per cubic centimeter of milk, and 354 per cubic centimeter of cream.

A comparison of these figures with the 10,000 bacteria per cubic centimeter for milk and 15,000 per cubic centimeter for cream, which would be permitted under the terms of our contract, and with the 250,000 bacteria to the cubic centimeter which the Milwaukee Health Department fixes as its maximum limit, shows that the regulations as to cleanliness have been scrupulously carried out, and also shows their wonderful effectiveness.

It has not been possible, with the funds at the disposal of the Commission, to make a complete qualitative study of the bacteria present in the milk at the time of every examination. But through the courtesy of our bacteriologist, Dr. F. E. Darling, we are enabled to give the following report on the findings in the milk examined Dec. 15th, 1904. This milk contained 275 bacteria per cubic centimeter.

"The milk was plated fresh and also after it had stood a few days so as to give all the bacteria present a chance to develop. The species would remain the same, but the numbers would increase. After spearing off the different colonies I find the following results: All of the plates contained colonies of Bacterium Coli Communis. All but four of the plates contained Bacillus Acidi Lactici. Five of the plates contained Bacillus Subtilis.

"In all, twenty plates were made but no other species was determinable. I found no pus germs and after two weeks time no mould fungi have developed."

It is satisfactory to note that only three varieties were found and that these are all among the common air-borne organisms. This result speaks well for the condition of the cows and for the care in handling the milk.

The visits of inspection of our Veterinary Inspector, Dr. A. S. Alexander, of the University of Wisconsin, have been made at least once a month and have been of a thorough and painstaking character. His recommendations and suggestions have all been of a most useful nature, and have been carried out with all possible dispatch.

The work of our bacteriologist, Dr. F. E. Darling, and of our chemists, Mr. A. S. Mitchell and Mr. Davenport Fisher, has been at all times careful, conscientious, and satisfactory.

During the year 245 cows have been tuberculin tested; of this

number 4 reacted and were condemned and destroyed; while 6 were held for subsequent retesting before admission to the herd.

MILK COMMISSION OF THE MILWAUKEE MEDICAL SOCIETY.
L. BOORSE, Chairman,
A. W. MYERS, Secretary.

BIENNIAL REPORT OF THE STATE BOARD OF MEDICAL EXAMINERS.

We publish the following excerpts from the report of this Board addressed to the Governor, Dec. 30, 1904.

We have attempted to comply with the duty imposed upon us by the legislation referred to, viz.: to enforce our medical laws, and quite generally have been successful. A number of prosecutions have been instituted and conducted under the supervision of this board, and with one or two exceptions, we have been successful in bringing to justice violators of our medical laws. There are here and there juries, and even inferior courts, who construe our medical laws as a protection of the medical profession, and not a protection of the public generally, and therefore, occasionally refuse to enforce same. We are glad to say that such juries and inferior courts are very few. It is, however, true that the board has not been able to enforce the law in every case where complaint was made, because the state of Wisconsin is quite a large state, covering a large territory, and in some instances, the evidence necessary to sustain the complaint was not obtainable, and in other cases, it seemed difficult to start the local machinery of administering the law in motion, for reasons that were not always satisfactory to ourselves, but nevertheless, were sufficient to block a successful prosecution. Our people generally, however, are beginning to learn the purpose of our medical legislation and to appreciate such purpose. We anticipate less difficulty in the future in attempting to enforce these laws and feel confident in saying that violations of our medical laws will be promptly punished, and imposters, quacks, and charlatans will find the state of Wisconsin an unhealthy place for them to ply their trade. Perhaps the most notable new provision in the medical laws of 1903 is the so-called "reciprocity provision." This provision seemed clear, explicit, and easily enforced, but nevertheless, we have found that some persons, including attorneys-at-law, were under the impression that any license granted by an adjoining state *ipso facto* entitled the holder of such license to the same license in this state. In fact, an attempt has been made to eliminate entirely the discretion of the board in this matter, and there is now pending a case in the Circuit Court of Milwaukee County where this question has been urged and this contention relied upon to compel the board to grant a reciprocity license to relator, the board having refused to give such relator a license, although he did hold a license from the State Board of Illinois. At the writing of this report, this case is still undecided. We will, however, receive a construction of the reciprocity provision of our medical

laws, and when such construction has been endorsed by our Supreme Court, if such endorsement is necessary, the board will then have all the guidance on this subject necessary.

We are of the opinion that one or two additional provisions ought to be added to our medical laws. During the past, the board, and particularly the secretary of this board, has received a large number of complaints against incompetent persons who attempted to practice, and do practice, midwifery. For some reason or other, there is no law upon our books regulating the practice of this very important branch of surgery. The last legislature saw fit to determine the qualifications of persons who are known as barbers. It strikes us that legislation regulating the practice of midwifery is of much more importance, and that something in this direction ought to be done at once. Under the law as it now stands, of course, the board is powerless to do anything in these cases, where complaints are made, if the complaints are lodged against persons who do not claim to be physicians or surgeons.

Our law likewise seems to be somewhat defective in cases of persons who, when they began the practice of medicine, surgery or osteopathy, possessed the necessary qualifications, and secured the necessary legal endorsement for the practice of the profession, afterwards, by reason of unprofessional or dishonest conduct, by the practice of fraud or deceit, and even indulging in criminal practices, have forfeited the right of being considered honorable practitioners, in that it does not make any definite provision in such cases, and does not provide for the revocation of the license, but seems to allow persons, after once having received authority to practice, to go on, no matter what their conduct or their character may be.

The law of Michigan on this particular subject seems to be quite complete, and we take the liberty of quoting in substance this provision:

"The Michigan Board of Medical Examiners shall refuse to issue a license to any person guilty of grossly unprofessional and dishonest conduct of a character likely to deceive the public, and said board shall, after due notice and hearing, revoke a license issued subsequent to the passage of this act or subsequent to the date of the present existing medical laws of Michigan, for like cause or for offenses involving moral turpitude, habitual intemperance, the drug habit, or for fraud or perjury in connection with obtaining a license, or for a license obtained or issued through error, when such offenses shall have been legally established in a court of competent jurisdiction; and provided further, after the passage of this act, the board may, at its discretion, revoke a license, after due notice and hearing, of any registered or licensed practitioner who inserts any advertisement in any newspaper, pamphlet, circular or other written or printed paper relative to venereal diseases or other matter of any obscene or offensive nature, derogatory to good morals."

This clause in the medical laws of Michigan has been endorsed by the local and the national medical societies.

The necessity of a provision of this kind has been made apparent to this board repeatedly, and we recommend that the legislature enact a provision of this kind, in order further to prohibit impostors, and even criminals, from imposing upon our people, and bringing reproach upon the profession generally.

THE STATE MEDICAL SOCIETY OF WISCONSIN.

ORGANIZED 1841.

Officers for 1904-1905.

C. W. OVIATT, Oshkosh, President.

J. A. L. BRADFIELD, La Crosse, 1st Vice-President.

GILBERT E. SEAMAN, Milwaukee, 2nd Vice-President.

A. B. ROSENBERRY, Arbor Vitae, 3rd Vice-President.

CHAS. S. SHELDON, Madison, Secretary.

S. S. HALL, Ripon, Treasurer.

A. T. HOLBROOK, Milwaukee, Assistant Secretary.

Councilors.

FOR ONE YEAR.

1st Dist. H. B. Sears, - - Beaver Dam
2nd Dist., J. G. Meachem, - - Racine

FOR TWO YEARS.

3rd Dist., F. T. Nye, - - - Beloit
4th Dist., E. S. Hooper, - - Darlington

FOR THREE YEARS.

5th Dist., J. F. Pritchard, - - Manitowoc
6th Dist., J. S. Walbridge, - - Berlin

FOR FOUR YEARS.

7th Dist., W. T. Sarles, - - - Sparta
8th Dist., T. J. Redelings. - - Marinette

FOR FIVE YEARS.

9th Dist., D. L. Sauerhering, - Wausau
10th Dist., E. L. Boothby, - - Hammond

FOR SIX YEARS.

11th Dist., J. M. Dodd, - - Ashland
12th Dist., A. T. Holbrook, - - Milwaukee

Next Annual Session, La Crosse, June, 1905.

The Wisconsin Medical Journal, Official Organ.

COUNTY SOCIETY DUES ARE NOW PAYABLE.
DO NOT FORFEIT YOUR STATE SOCIETY MEMBERSHIP.

SOCIETY PROCEEDINGS.

BARRON-GATES-POLK COUNTY MEDICAL SOCIETY.

The annual meeting of the Barron-Gates-Polk County Medical Society was held at Cumberland on December 6. The Washburn-Sawyer-Burnett County Medical Society, Dr. Green of St. Paul, and Dr. Boothby of Hammond, Councilor for the Tenth District, were present as guests.

Dr. Cronmett, of Amery, read a paper on "Puerperal Eclampsia," which was very interesting and was much discussed.

Dr. Babcock presented a paper on "The Steps Necessary to Produce an X-ray Picture."

The paper by Dr. Green, of St. Paul, on "Some of the Common Errors in Cardiac Diagnosis," was very interesting and instructive and brought out a free discussion.

Dr. Boothby, of Hammond, Councilor for the Tenth District, addressed the Society, giving a very instructive talk on the purposes of medical societies and urging the advisability of having monthly meetings. In the discussion which followed it seemed to be the opinion of most of the members that it would not be possible to meet as often as Dr. Boothby had suggested.

The election of officers for the ensuing year resulted as follows: President, Dr. Gentz Perry, Amery; vice-presidents, Dr. A. L. Wells, Clear Lake, Polk County; Dr. O. M. Sattre, Rice Lake, Barron County; Dr. W. F. O'Connor, Ladysmith, Gates County; secretary, Dr. I. G. Babcock, Cumberland.

The meeting closed with a banquet at the Hotel Cumberland.

I. G. BABCOCK, M. D., *Secretary.*

COLUMBIA COUNTY MEDICAL SOCIETY.

At the regular meeting of the Columbia County Medical Society, held at Portage, Dec. 14, 1904, the followings officers were elected: President, Dr. B. C. Meacher, Portage; Vice-President, Dr. B. F. Bellack, Columbus; Secretary and Treasurer, Dr. A. W. Jones, Randolph; Censor, Dr. E. P. Andrews, Portage; Alternate Delegate to State Convention, Dr. B. C. Meacher. The meeting was devoted to the discussion of contagious diseases.

F. D. BENTLY, M. D., *Secretary.*

CRAWFORD COUNTY MEDICAL SOCIETY.

The fourth quarterly meeting of the Crawford County Medical Society was held in the parlors of the Sanatarium in Prairie- du Chien, Nov. 22, 1904.

Dr. J. G. Hoffman read a paper on *Home Treatment of Pulmonary Tuberculosis.* Dr. W. T. Pinkerton gave an interesting report of Dr. McCormack's address at the district meeting. Dr. E. Evans, of La Crosse, gave an interesting and instructive address on *The Complete Diagnosis.* This paper was regarded as so valuable by the Society, that the secretary was requested to obtain a copy, and forward it to the JOURNAL for publication.

The Physician's Duty in Obstetric Cases was discussed by Dr. C. E. Cole. Dr. G. H. Perrin presented a paper on *My Treatment for Ordinary Skin Diseases.*

A general discussion followed the reading of the papers, in which Dr. Stanton took a leading part.

This being the last meeting of the year, election of officers was in order and resulted as follows: President, Dr. W. T. Pinkerton, Prairie du Chien; Vice-President, Dr. Jas. Dinsdale, Soldiers Grove; Secretary and Treasurer, Dr. J. G. Hoffman, Prairie du Chien.

It was voted to hold the next meeting at Wanzeka, the date to be determined later.

A. J. MCDOWELL, M. D., *Secretary.*

DANE COUNTY MEDICAL SOCIETY.

The third quarterly meeting of the Dane County Medical Society was held in conjunction with the County Societies of the Third Councilor District, in honor of Dr. J. N. McCormack, of Bowling Green, Ky., November 18, 1904, at Madison. The following program was presented:

Forenoon session. "The Value of Systemic Treatment in Diseases of Pelvic Organs," Mr. Mila B. Sharp, Madison.

"Intestinal Autointoxication," Dr. B. J. Wadey, Belleville.

"Historical Summary on Anatomy of Kidney," Dr. Ferdinand Schmitter, Instructor in Anatomy, University of Wisconsin.

"The Gymnastic Treatment of Constipation," Dr. J. C. Elsom, Director of Gymnasium, University of Wisconsin.

"The Etiology of Appendicitis," Dr. R. H. Jackson, Madison.

"The Purpose of the Anatomical Department at the University of Wisconsin," Professor C. K. Barden.

Banquet at 1 o'clock P. M., Park Hotel. Magister: Dr. C. S. Sheldon.

"Achievements of Modern Medicine," Dr. J. A. Jackson, Madison.

"The Third Councilor District," Dr. F. T. Nye, Beloit.

"What I Think About Medical Societies," Dr. S. R. Moyer, Monroe.

"Medical Organization in Wisconsin," Dr. J. N. McCormack, Bowling Green, Ky.

At 2:45 P. M., Circuit Court room.

Address by Dr. J. N. M'Cormack, Bowling Green. Ky., National Organizer.

8 P. M.—Smoker at office of Dr. C. S. Sheldon.

R. H. JACKSON, M. D., *Secretary.*

DUNN COUNTY MEDICAL SOCIETY.

The Dunn County Medical Society met at Menomonie, Dec. 20, 1904, in annual session.

A clinical case of needle in the knee was shown by Dr. Grannis, illustrated by a skiagraph taken at the time of the accident, and again eight months later showing migration.

A paper on *Measles* was read by Dr. Larson and was generally discussed.

Drs. J. E. McCoy, of Elk Mound, and B. J. Stevens, of Menomonie, were elected to membership.

The fee bill was read and amended and ordered printed.

Mileage in cases of examination of insane was discussed and a motion was passed that the secretary be instructed to correspond with secretaries of the other county societies, with a view to getting the rates raised to correspond with that for other work.

It was moved and carried that all papers read become the property of the Society.

The following officers were elected for the ensuing year: President, Dr. L. A. Larson, Colfax; Vice-President, Dr. J. H. Denham, Downsville; Secretary and Treasurer, Dr. B. J. Steves, Menomonie.

Supper was served at the Royal. It was moved and carried that a special meeting be held the third Saturday in January.

G. A. BARKER, M. D., *Secretary.*

GREEN COUNTY MEDICAL SOCIETY.

The regular quarterly meeting of the Green County Medical Society was held at Brodhead on December 13, 1904, and the following papers were read:

"Diagnosis and Treatment of Gastric Ulcer," Dr. E. J. Mitchell, Brodhead.

"Catarrhal Enteritis," Dr. J. Mauermann, Monroe.

"Etiology of Tuberculosis," Dr. W. H. Sheldon, Madison. (By invitation.)

"Diagnosis of Tuberculosis," Dr. F. T. Nye, Beloit. (By invitation.)

"What of the Old Treatment of Tuberculosis," Dr. F. W. Byers, Monroe.

"Surgery of Tuberculosis," Dr. R. H. Jackson, Madison. (By invitation.)

"Prevention of Tuberculosis," Dr. W. B. Monroe, Monroe.

The meeting was well attended and the papers were thoroughly discussed.

It was urged by the speakers that the profession make an organized effort to educate the public as to the cause and prevention of tuberculosis and the necessity for legislative enactment and restrictions to control the disease.

Two new members, Drs. H. R. Kauffman, of Monroe, and E. Blumer, of Monticello, were taken into the Society, and the application of Dr. Darby, of Brodhead, for membership was received.

The annual election of officers resulted as follows: Dr. T. W. Nuzum, Brodhead, president; Dr. E. J. Helgesen, New Glarus, vice-president; Dr. Roberts, Albany, second vice-president; Dr. W. B. Monroe, Monroe, secretary; Dr. J. G. Randall, Monroe, treasurer; Dr. R. B. Clarke, Monroe, censor; Dr. S. R. Moyer, Monroe, delegate.

The banquet during the noon recess was a success in every way. Dr. Byers was toastmaster, and responses were made by Drs. T. W. Nuzum, F. T. Nye and H. B. Gifford, and Rev. J. H. Palmer.

W. B. Monroe, M. D., *Secretary.*

VILAS COUNTY MEDICAL SOCIETY.

The annual meeting of Vilas County Medical Society was held at Minocqua, Dec. 20, 1904. Officers elected for the year 1905 were as follows: President, Dr. A. B. Rosenberry; Secretary and Treasurer, Dr. W. J. Pinkerton; Censor for three years, Dr. R. C. Aylward.

There were no papers presented, but we had an informal discussion on a few cases.

The meeting was adjourned *sine die.*

W. J. Pinkerton, M. D., *Secretary.*

WASHBURN-SAWYER-BURNETT COUNTY MEDICAL SOCIETY.

The annual meeting of the Washburn-Sawyer-Burnett County Medical Society was held at Shell Lake, December 12. Two new members were admitted.

Dr. J. M. Dodd, of Ashland, district councilor, read a paper on "The Good Derived from Medical Meetings: and Harmony in the Profession."

Dr. J. P. Cox, of Spooner, gave a delayed report of the State Medical Society meeting as he saw it as a delegate.

Dr. J. B. Trowbridge, of Hayward, reported a case of "Vaginal Hematoma following Parturition."

The election of officers resulted as follows: President, Dr. J. P. Cox, Spooner; vice-president, Dr. C. L. Storrey, Hayward; secretary and treasurer, Dr. E. R. Hering.

E. R. Hering, M. D., *Secretary.*

THE SECOND DISTRICT MEDICAL SOCIETY.

A temporary organization of the Second District Medical Society was effected at the conclusion of Dr. McCormack's address to the physicians of Racine, Kenosha, and Walworth counties at Burlington, Nov. 17. Dr. J. C. Reynolds, of Lake Geneva, was elected president; Drs. Haven, Cleary and Bill, vice-presidents, of Racine, Kenosha, and Walworth counties, respectively; Dr. J. P. McMahon, Union Grove, was chosen secretary.

The first regular meeting of the Society was held at the Hotel Racine, Dec. 29; the meeting was called to order at 10 o'clock by President Reynolds, and the following program was presented:

The Peritoneum in Abdominal Operations, by Dr. G. D. Ladd, Milwaukee.

Dr. Ladd in his address discussed the peritoneum in abdominal surgery as follows: Peritonitis results from direct contact of bacteria coming from without at time of operation, or from rupture of abscess cavities, or viscera, and by transmigration of bacteria. Local peritonitis forming adhesions protects the general cavity in these latter cases and is a conservative process. Accumulations of serous fluid or blood in the peritoneal cavity after operation forms a culture medium and favors infection. Open connective tissue spaces are also danger points. Pure silk being an animal product is absorbed by the peritoneum. Much of the silk in the American market has been adulterated with cotton and linen fiber, which does not absorb. As linen and cotton fiber retain the albuminoid fluids of the body they may, at even a late date, become infected. A test for the purity of silk is the immersion of a small piece in a saturated aqueous solution of caustic potash. At the end of twelve hours silk is wholly dissolved, a line of resin which sometimes remains quickly disappearing on slight agitation of the solution. Linen and cotton fibers, if present, do not dissolve.

The peritoneum secretes and absorbs. The excessive secretion of serum following an operation will of itself irrigate the cavity toward the infected portion, if drainage is supplied at that point, and the general cavity will subsequently, but quickly be walled off. Drainage of the free peritoneal cavity with plain sterile gauze was advocated whenever local infection exists, and the general peritoneal cavity is opened, this being in addition to drainage of the infected cavity or surfaces. The safety in the above procedure enables the surgeon to break up adhesions extensively where it becomes necessary to do so. Drainage of the general peritoneal cavity was stated to be often sufficient to arrest general peritonitis in its incipient stage, as found during operation. In treating general septic peritonitis he advocated thorough irrigation from the most distant portion of the abdomen toward the point of original infection, with very free drainage at that point. A brief report of typical cases followed.

Anemias, with Microscopical Demonstrations, by Dr. W. A. Fulton, Burlington.

Business Side of Medicine, by Dr. W. H. White, Lyons.

Abscess of the Liver, with Demonstration of Pathologic Specimens, by Dr. J. M. Beffel, Milwaukee.

Ethics, by Dr. J. L. Cleary, Kenosha.

At the conclusion of the program is was decided to hold the next meeting at Lake Geneva, early in September. The Society voted to levy an equal

tax on the treasuries of the County Societies of the district to defray the expenses which had been incurred by the district meeting.

The president and secretary were empowered to arrange the program, and set the date for the September meeting.

All the above-named officers were re-elected and the meeting adjourned subject to the call of the president. J. P. McMahon, M. D., *Secretary.*

MEETING OF THE MILWAUKEE MEDICAL SOCIETY.

December 13, 1904.

Dr. Hitz exhibited two patients, one of whom had had a Caldwell-Luc operation for *chronic empyema of the antrum,* in which almost the entire antral cavity could be seen by direct inspection through the anterior nares. The other was a very serious case of *multiple sinusitis,* involving both frontal sinuses, anterior ethmoidals, and both antra, in which the antra had been operated by the alveolar method, and the frontal by the Luc-Ogston method; a relapse occurred three months after the frontal operation. Final cure resulted only after a typical Killian operation upon the frontal sinuses and the Caldwell-Luc for the anterior sinuses. This operation was done under chloroform anesthesia, lasting four and one-half hours, completed at one sitting, and with perfect recovery in three weeks. Report is made eleven months after operation. In the frontal operation the inner table was found softened in two areas as large as a dime. Patient suffered no ocular disturbance other than a certain amount of ocular fatigue between the third and fourth week, which was attributed to the contraction of scar tissue.

Dr. Ridlon, of Chicago, by invitation of the Council, delivered an address upon *"The Diagnosis and Treatment of Potts' Disease."* He took up the subject under three headings: speaking first of the results following untreated disease; secondly, results to be obtained with fairly skillful treatment; and, thirdly, of the results to be obtained by ideal treatment. Dr. Ridlon says the treatment is chiefly mechanical and should be skillfully applied. During the active stage recumbency may be necessary, and when used, should be absolute, not allowing the child to arise even for a moment. An apparatus which makes this treatment possible was exhibited. For general use he believes the plaster of Paris jacket to be of great value for obtaining a large degree of immobilization. The doctor described in detail the method used by him in the application of jackets, illustrating the steps with the exhibition of apparatus used. He exhibited spinal braces, explaining the principle of their use, and insisted that when used they must be made to fit perfectly. Dr. Ridlon condemns the use of the jury mast for cervical disease, and exhibited head and chin pieces which bring about a more nearly perfect degree of immobilization. He condemns the practice of forcible correction of the kyphosis, stating that the danger of the proceeding, with a mortality rate of ten per cent., is not justified when the more gradual method brings about almost, if not quite, as good results. Operative treatment plays no part in the treatment of Potts' disease. Laminectomy in supervening paraplegia is unnecessary, for recumbency will remove the symptom. Abscesses should

be left alone, being harmless in themselves, and disappearing when the seat of the disease is properly treated.

Dr. Ridlon considered quite exhaustively the differential diagnosis between Potts' disease and hysteria, sciatica, torticollis, rachitic spine, scoliosis, malignant disease, typhoid spine, ostitis deformans, syphilis, spastic paralysis, pseudo-hypertrophic paralysis, and hip-joint disease.

HOYT E. DEARHOLT, *Secretary.*

CURRENT LITERATURE.

A Symptomatic Cure of Convulsive Tic Douloureux.—JOSEPH. P. EASTMAN (*Jour. of Amer. Med. Assoc.*, Sept. 24, 1904), reports a case of typical, intense tic douloureux involving the right side of the face. The first paroxysm occurred about twenty years ago, subsequent attacks becoming more frequent and more severe. Practically all the many remedies recommended for the relief of this condition had been tried without benefit. All the teeth had been extracted. The whole right side of the face was exquisitely tender, particularly in the neighborhood of the infra-orbital and mental foramina. The tongue was sore and tender at all times.

A two per cent. solution of osmic acid was injected into the supra-orbital, infra-orbital and inferior dental nerves at the supra-orbital notch and infra-orbital and mental foramina. Ten drops of a two per cent. solution of osmic acid were injected into each branch, and two or three drops were forced into the perineural fat of each foramen around the nerve.

Up to the present time there has been no return of the pain since its abatement one week after the operation.

Some nephritis was caused by the elimination of the acid.

(A. W. ROGERS.)

Pneumonia (*Bulletin of the Chicago Health Department*, November, 1904): "Pneumonia is much less prevalent and less fatal this year than usual. During the first eleven months of 1903 there were 4,133 deaths from the disease. During the similar period this year only 3,690 pneumonia deaths occurred. In November, 1903, there were 333 deaths and last month only 260 from pneumonia."

"As a contribution to the labors of the New York Pneumonia Commission, the director of the Laboratory, Dr. J. F. Biehn, reports to the Commissioner that he has recently confirmed experiments made during a number of years, conclusively showing that the cause of pneumonia is a mixed infection. Rabbits injected intravenously with the sputum of a single healthy person fail to develop pneumonia; injections with the mixed sputa of two or more healthy individuals never fail to produce a typical pneumococcus infection.

These results demonstrate among other things, the wide diffusion of the pneumonia germs; they are present in the secretions of the mouth and throat of the vast majority of healthy individuals, usually lying dormant and inactive. Mixed with the germs of others they develop the disease.

The practical point for prevention is the necessity of avoiding all unnecessary contact with a pneumonia patient, and the further necessity, on the part of other members of the family, nurses and attendants, for sterilizing their throats during the course of the disease." (U. O. B. WINGATE.)

The Specific Origin of Tabes and General Paralysis.—A careful survey of the literature during the past several months brings out increasing evidence of the specific origin of tabes dorsalis and general paralysis of the insane. In the past, many excellent authorities have steadfastly maintained that syphilitic infection accounted for about 50 per cent. of these cases; while other authorities place this per cent. as high as 95. The first class of these specialists have of late been less secure in their position, influenced probably by such facts as the following:

Walter Brosius (*Archiv. für Dermat. u. Syph.*, LXXI., 1904), details an endemic of syphilis occurring twelve years ago, and notes the sequelæ observed at the present time. It appears that in 1892 seven members of a gang of glass-blowers were infected simultaneously by one of their fellows through the medium of a blow-pipe. All of them were discharged cured after a single course of inunctions. In the years 1902 and 1903 five of these seven individuals consulted the author on account of consequent complications of their syphilitic infection. The following is a resumé of the history of these cases:

1. S. V., 40 years—father of eight healthy children—had chancre of lip, marked tabes and paraparetic amaurosis, marked atheroma.

2. S. C., 38—brother of above, widower—indurated glands of neck, paralytic dementia.

3. L. H., 40—married, several miscarriages—children sickly, scar of chancre on lip. Progressive paralysis.

4. N. H., 36—married, one child living—frequent eruption; had chancre of upper lip. Nervous system negative.

5. F., 30—married, three healthy children—had chancre of lower lip; general atheroma in beginning. Signs of tabes.

Thus out of the seven cases infected in March, 1891, four of the five, who have since been observed, are suffering from incurable affections of the central nervous system. This would offer incontrovertible evidence of the important part syphilis plays in the etiology of tabes and general paresis. Here are a number of individuals infected at the same time and under the same conditions receiving the same treatment, and subsequently living under the same conditions of life. The fact that one of the patients is free from symptoms referable to the central nervous system, does not exclude syphilis as being the direct cause of the tabes and general paralysis in the remaining four—(80%). The author states further that treatment with iodides—particularly iodopin, was without any effect.

Further evidence lies in the fact that recently there came under our observation a case of paresis in husband and wife, the husband developing paresis some 12 years after syphilitic infection and after having infected his wife, the husband dying and the wife still living in a state of complete dementia.

Recently in a Chicago clinic there was exhibited a family in which the wife and three children had been infected by syphilis through the husband. The husband died of paresis, one child died from syphilitic brain disease, the wife is at present suffering from paresis, one child is suffering from hemiplegia and another from paresis. (A. W. ROGERS.)

Erythema Infectiosum.— H. L. K. SHAW (*Amer. Jour. Med. Sc.*, Jan., 1905), considers that erythema infectiosum, a disease first described by Escherich, which he has seen in Vienna, has clinical features distinct enough to justify its classification with the acute exanthemata.

It occurs in epidemics, chiefly in the spring and summer months, affects children between four and twelve years of age, and occasionally young adults, and frequently follows measles or rötheln. The period of incubation is from six to fourteen days. Although there may be slight prodromes, in most cases the first symptom noticed is the eruption, which appears first on the cheeks as a confluent, symmetrical, rose-red efflorescence, with well defined, slightly raised edges, sharply limited by the naso-labial folds, temples and angles of the jaws, and fades after four or five days. On about the second day, a rash appears on the body, the outer surface of the arms and legs being most involved, while the trunk is comparatively free. This eruption is rose-red, morbilliform, slightly raised, with an appearance suggestive of lacework, lasts from six to ten days and is not followed by desquamation. The lymphatic glands are not enlarged, there is no coryza or cough, no strawberry appearance of the tongue, and only exceptionally is fever detected.

In rötheln, prodromal symptoms are not uncommon, the rash spreads rapidly over the entire body, especially on the chest and back, with its favorite seats on the face in the region around the mouth, back of the ears, and on the forehead. The lymph nodes, especially post-cervical, are invariably enlarged, and a temperature of 103 degrees is not uncommon. The appearance, spread and location of erythema infectiosum is entirely different. Measles can be excluded by the absence of all involvement of the mucous membranes, of all constitutional symptoms, and the uniform absence of the Koplik spots.

The prognosis is absolutely favorable and complications or sequelæ have not been observed. (O. H. FOERSTER.)

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ANNUAL ADDRESS OF THE PRESIDENT OF THE MEDICAL SOCIETY OF MILWAUKEE COUNTY.*

BY GILBERT E. SEAMAN, M. D.,
MILWAUKEE.

In retiring from the presidency of this society I must again take occasion to express to you, gentlemen, a keen appreciation of the honor you accorded me in electing me to this office. I have thought that rather an attempt a full discussion of any one theme, I might more profitably spend a few minutes of your time in a hasty glance at the past, present, and future of our society.

I must first remark that it is a subject for congratulation that the membership of the two county medical societies were united at the time they were, and that we have dwelt together during the past year in such perfect harmony of action. And why should it not be so? The purpose of a county medical society is two-fold: First, to further the science of medicine, and to thus protect the health of the community; and second, to further the material interests of its members.

From the standpoint of a physician both are propositions inseparably related to the material welfare of the doctor. Why should it not be so regarded, and, if so regarded, why from purely selfish motives, if from no other, should the physician not dwell in harmony at least with his brothers in the medical society?

Our object is to maintain this society, to do our share in the advancement of medicine, and to promote our own intellectual and material welfare. This can best be done by the member having the interests of the society at heart at all times in his conduct toward this body, rather than his own individual and temporary interest.

*Address delivered before the Medical Society of Milwaukee County, January 13, 1905.

The past history of this society, extending, as it does, back to the middle of the last century, is much the same as the past history of all similar bodies in the Middle West, and has varied with the varying activities of the practitioners of the community. Its transactions, kept in book form by the old-time secretaries, are a rich storehouse of local, historical medical interest, and, in so far as such a society could make them, they truthfully reflect the march of medical progress. Represented in the pages of these transactions are the names of distinguished men, long since passed away. Erastus B. Wolcott, who presided at the first meeting of this society, May 5, 1846, came to Milwaukee in 1839 from service in the army at various northern posts; a man of iron will and great personal courage; a skillful surgeon; the man who first performed the operation of nephrectomy. That he was appreciated by the people of this state is attested by the fact that at various times he served as a Regent of the University; Surgeon-General; Manager of the National Soldiers' Home; Trustee of the State Hospital for the Insane; and represented the state at the Paris Exposition in 1867.

Dr. J. K. Bartlett, who, in his day, was a power in this medical community, as well as in the community at large, was not only active in this society, but was one of the leaders of the American Medical Association. To his memory the members of the medical profession in Milwaukee owe a debt of gratitude for the generous gift of his large library to the Bartlett Clinical Club, which was the predecessor of the Milwaukee Medical Society. Dr. Bartlett was one of the most learned physicians who ever practiced here, and he was one of the founders of this magnificent Public Library in which we are now assembled.

Dr. Garner, a popular and faithful physician, was an active participant in the transactions of this body for many years, and, in fact, up to the time of his tragic death at the hands of a lunatic, whom he had examined and committed to an asylum in the course of his professional duties.

The records of this society in many instances attest the learning, exactness, attention to detail, and high professional ideals of Dr. William Thorndike, Sr., who served as secretary for a long time, and who in his day was a leader in his profession in this community.

Dr. J. B. Selby, who studied medicine in the office of J. K. Bartlett in 1843 and 1844, was, perhaps, the first medical student in Milwaukee. He was active in the cholera epidemic of 1850.

Dr. J. B. Dousman, a highly educated, thoughtful man, a skill-

ful physician, who lived here from 1849 to 1868, was an earnest supporter of the code of ethics, and an able and uncompromising opponent of homeopathy.

Dr. A. L. Castleman, who came to Milwaukee to practice in 1835, was a member of the State Constitutional Convention of 1847, a Regent of the State University, a member of the provisional Medical Faculty of the University, many years ago, and served as a surgeon in the Civil War.

Dr. A. Blanchard, who came to Milwaukee to practice in 1846, is said to have been an excellent physician and an old-style gentleman in every respect. He was an able and strenuous opponent of homeopathy, served for a long time as U. S. Marine Hospital Surgeon at this port, and died full of years and honors in 1868.

The history of this society is largely the history of medical men and medical affairs in this county, and it is a history that the medical men of to-day may well pay some attention to, and contemplate with pride; for the men who are passed and gone, and whose histories have been handed down to us, were, for the most part, men of superior education and attainments, graduates of the best schools of their day; men of strength, influence, and real leadership in the community, and, following those already mentioned, were others, whom many of us knew and do know. Senn, the most brilliant man in many ways who ever practiced medicine in this county, of whom we may speak with professional pride, and in words of praise without hesitancy, because he has long since gone to other fields of labor; Solon Marks, grand old man of Wisconsin medicine that he is, whom we still have among us, and whom we hope to keep for many years to come; Dr. E. W. Bartlett, always a leader in the medical thought of the community, a public spirited citizen, to whom we owe much for the building up of the magnificent Museum attached to this Public Library, and for pioneer work along the lines of effective medical legislation.

It is well to have these men with us, enjoying, as they do, the rewards of a long and honorable professional career. These, and many others, are the men who have made the history of medicine in this county and in Wisconsin. Are they not worthy of at least a passing glance? Are they not indeed worthy of our pride and emulation? The profession of this community may well take more interest than they do in local medical history. Too few of the men of the past have been accorded the respect and appreciation that is due them from their medical successors. There is too little medical tradition

in our midst. The medical men whose deeds are worthy of remembrance and rehearsal have not all lived in the great Eastern centers of medical thought and opinion. Some of them were our medical predecessors in this city and county—the pioneers of medicine in this state. This is no longer the Far West; this is no longer a new community; we have history to look back upon, tradition to record and to rehearse, idols to erect and to preserve. In the march of progress medical institutions of dignity and promise have grown up amongst us. If we may, then, let us look back upon the medical past of this society with pride and thus gain inspiration for the present and hope for the future.

The present status of our society is of real importance to every physician in this county. Every respectable, legitimate practitioner of medicine residing here should be a member of this society. If the society is to justify its continuous existence, and accomplish its aims and purposes, every member should take an active working interest in its welfare. A more generous response must be forthcoming to the requests for contributions to the program; medical matters of interest, or affecting the affairs of physicians generally, are properly discussed in a county medical society. The society should take an active interest in all laws and ordinances relating to public health in the city, county and state. The laws relating to the practice of medicine should be of special interest to us, and the hands of the Board of Medical Examiners should at all times be upheld by the county society, to the end that we may rid the state of quackery and purge the newspapers of the filthy and disgusting quack advertisements. These, and many other functions, may properly be exercised by this body through special committees, or through our standing committee on Public Health and Legislation.

During the past year many of these things have been done. A committee was appointed early in the year to urge upon county and city the necessity for detention quarters for the insane, and a movement for the establishment of such quarters has been inaugurated. The promise is bright for the realization of the project in the near future.

A special committee of this society took part in the recent investigation of the affairs of the County Hospital, and rendered a report, the reading of which is commended to every physician in the county. This report should aid in placing the affairs of the County Hospital under the management of a competent board of trustees, where it belongs, and take it out of the hands of the Board of Super-

visors of this county, which body is not the proper one to run the affairs of an institution for the sick. This must be done by an act of the legislature, and this society should see to it that such an act is prepared and passed, if possible.

The various committees have done their work well, and I desire here, on behalf of the officers, to express thanks for their cordial co-operation and support.

I would suggest that in the future the society continue to consider well the appointment of committees for work of this nature, and that the members who accept committee work be impressed with the fact that their acceptance of the duty is a promise of faithful attention to the matter in hand. In this way—and in this way only—will the desired results follow upon our efforts.

I desire to make special mention of the work of our Committee on Tuberculosis. This committee has held a number of meetings, the city has been districted for the work, a number of physicians have been interested, some valuable information as to the number and location of cases, past and present, has been obtained, some public interest has been aroused, and it is hoped that in the future the work will be so enlarged and elaborated as to result in a public exhibition of the subject, and such public interest in the matter as will lead to the establishment of an institution to be maintained by voluntary contributions, and which shall be wholly devoted to the treatment of sufferers from tuberculosis, among those in poor financial circumstances. Such a plan would surely result in more effective control of this disease. We owe this duty to the public. The matter is being taken up and worked out in almost every large city of the land, and ours must not be the victim of professional neglect or apathy in this respect. There is a large tuberculous ward in the County Hospital under the same roof with the other wards. Modern science teaches that it does not belong there. In the interest of the victims themselves, as well as that of the other patients, they should be in a separate institution where they may have the benefit of the special conditions which are necessary to their recovery, and which are essential to the control of the disease. Many of these cases cannot avail themselves of more favorable climatic conditions, and such an institution would in no way conflict with the proposed State Hospital. I venture to hope that we shall shortly have such an institution in this community, and that this society will do all in its power to further its establishment and successful maintenance. If, by the appointment of a special committee for that purpose you set the

wheels in motion that will bring about such a result, you will have justified the entire past of this society—if it need any justification—and you will be deserving of the blessings of the afflicted from this disease for countless years to come. Let such a committee be appointed; let them formulate some simple working plans; ask some of the influential business men of the city to help them; solicit the co-operation of the press in the work; and so point out to the people the necessity that exists, and I do not hesitate to say that the project will get all the support that is necessary to make it a success. If you doubt it, observe what has been done, and is being done, in other and similar communities.

During the past year we have made great gains in membership until at the present time we have upwards of two hundred and fifty members. But we are not satisfied; we should have more members, and still greater interest in the meetings; more activity on the part of a larger number of men. The future of this society is what its members choose to make it. If we are imbued with the right motives; if we take a proper interest in the advancement of the science of medicine; if we lead, as we should, in all matters that pertain to public health and the physical and mental welfare of the community; if we are true to the best teachings of the Masters of Medicine; if we cultivate personal acquaintanceship and promote cordial professional relations; if we occasionally break bread together, and so develop our social instincts; if, by wise action, we promote the material welfare of all our members so as to make membership here more immediately attractive and helpful—then, indeed, will we fulfill the mission of a County Medical Society, and be, in fact, what is contemplated in this great movement of medical reorganization, the representative medical body of this district.

The Resection of the Tubercular Knee-Joint and Its Results. — Blauel bases his views upon 400 operations done in von Bruns' clinic (*Beitr. z. klin. Chir.*, XLII, 1, 1904). He divides the cases resected in, first, those who showed no improvement under conservative treatment; second, those in whom the disease had persisted for years and in whom such changes had taken place in the joint that no cure with a useful joint could be expected; third, those in whom rapid progression of the fungous process was present.

He also discusses the functional result of the operation and the influence of resection on the general system. After giving a statistical resumé of the cases, he arrives at the following conclusion: The good results obtained by resection in tuberculous knee-joint disease warrant us in regarding the radical operative treatment as the treatment of choice in adults and children in all the severe forms, and in all mild cases when a cure did not result in a reasonable time under conservative care.—(Geo. P. Barth.)

ORIGINAL ARTICLES.

SURGICAL TREATMENT OF ASCITES DUE TO CIRRHOSIS OF THE LIVER, WITH REPORT OF A CASE.*

By WILLIAM MACKIE, M. D.,
MILWAUKEE.

Surgical interference for the relief of ascites in cirrhosis of the liver is based upon its mechanical cause—the obstruction of the portal circulation through the liver from new connective tissue formation. The removal or the arrest of the new tissue formation is not to be hoped for; but the engorged portal circulation is relieved by the diversion of the blood current through new channels formed in the adhesions established.

Talma and Drummond, from observation made post mortem, directed attention to the absence of ascites in cases of cirrhosis of the liver where adhesions were plentiful between the abdominal viscera and the parietes, and suggested that such adhesions established artificially might be of benefit. The normal collateral circulation between the portal and the systemic veins becomes enlarged and will suffice up to a certain degree, but when this is exceeded ascites is produced. This collateral circulation consists of an anastomosis of the portal trunk with the phrenic and azygos veins through the veins of the subperitoneal tissue in the hepatic ligaments; the left branch of the portal vein with the epigastric and other veins in the abdominal wall through a large vein in the round ligament; the coronary veins with the azygos through the esophageal plexus; the inferior mesenteric with the iliac vein through the middle and the inferior hemorrhoidal veins; and the pancreatic veins with the retroperitoneal (Sappey). This enlarged collateral circulation is seen during life in the veins of the abdominal wall in the "caput medusæ" around the umbilicus, and in the distended hemorrhoidal veins. Talma has demonstrated this post mortem. In one case the vein in the round ligament was as large as the finger.

When the collateral circulation fails, ascites is established. The aim of operative interference is to establish adhesions between the omentum, liver, and spleen (when enlarged), and the abdominal

*Read before the 58th Annual Meeting of the State Medical Society of Wisconsin, Milwaukee, June 24, 1904.

parietes by inducing a plastic peritonitis. The abdomen may be opened by an incision in the middle line, or to the right of the rectus muscle. The ascitic fluid is removed. The peritoneum covering the liver and spleen, and that part of the parietal peritoneum corresponding, is irritated by scarification, or preferably by dry gauze because it causes less oozing.

The omentum has been fixed in different locations by different surgeons. It has been sutured to the abdominal wall at a distance from the incision; pocketed between the peritoneum and the abdominal wall; spread over the upper surface of the liver and there retained by suture; or caught in the sutures closing the abdominal incision. Fixation to the abdominal wall has been most frequently employed. The liver has also been sutured to the abdominal wall. The abdominal incision is closed in the usual manner and over the dressing firm compression is made by adhesive strips to bring and maintain, as far as possible, the intra-abdominal organs in close apposition with the abdominal wall and so facilitate the early formation of adhesions. Provision for the drainage of the reaccumulating fluid prior to the formation of the additional collateral circulation through the medium of adhesions, can be made through a small incision above the pubes, or it can be removed by subsequent paracentesis. Drainage is objectionable. There is always the danger of infection and ventral hernia. It is also questionable if the drain will act for a sufficient length of time. In the presence of fluid the closing off of the drain from the general peritoneal cavity will be delayed, but it will be delayed long enough for the establishment of the collateral circulation. It has the advantage, however, of conducing to easier and better apposition of the liver and spleen to the abdominal wall.

Morrison has demonstrated the way in which benefit is accomplished. In his second case, one of typical cirrhosis, the patient remained well for two years and died as the result of an operation for the cure of a ventral hernia following the operation for the relief of the ascites. At the post mortem the abdominal viscera were removed with the abdominal wall. The whole was injected from the portal vein. The liver, spleen and the intestines were found attached to the abdominal wall by adhesions which contained little besides blood vessels; the omentum was also firmly adherent by vascular adhesions. Many of the vessels equalled in size the radial artery.

Greenough, up to December, 1902, collected 105 cases which had been submitted to this operation. Of this number 42 per cent. were improved, 58 per cent. not improved. The mortality, within thirty days was 29.5 per cent; and nine cases showed no recurrence

after two years. These statistics are not encouraging. It must be remembered that this has always been considered a fatal condition, although cases are recorded of recovery after repeated tappings—the exception. The operation has been practically before the profession only since the autumn of 1896, when Morrison reported his first two cases. Several continental surgeons acted on Talma's suggestion, but abandoned the operation. The majority of the cases were operated on late in the disease. With early operation better results will follow. Such patients, at best, withstand operation badly. To be of benefit, operative interference must be resorted to before there is any evidence of toxemia from the excessive destruction of the hepatic cells. Medication and early paracentesis should be given a trial. Failing, and in the absence of advanced renal and cardiac disease with general arteriosclerosis, operation should be considered.

The following report of a case will show what can be accomplished by operation. Mrs. J. first came under observation Nov. 18th, 1901. Her family history is negative. At ten years of age she had scarlet fever, and at twenty-one inflammation of the bowels. This latter was followed by gastric disturbances and pain in the region of the stomach for years. Menstruation has been regular until the onset of the present sickness when it became irregular and scanty. She has never been pregnant but gives a history of uterine troubles, treated locally, and attacks of pelvic peritonitis. At one time she was informed that she had an ovarian tumor. Evidence of specific history cannot be obtained. Her present illness dates back about two years. It began with pain in the dorso-lumbar region to the right of the middle line. Then followed frequent micturition, vesical tenesmus and all the symptoms of cystitis, which persisted for about two months. This was accompanied by considerable abdominal distension which suddenly disappeared with severe pain in the right iliac region. The pain in the back ceased and has not returned. No blood was observed in the urine at any time. During this sickness she lost twenty pounds in weight. No improvement in health followed. She complained of a general weakness. The appetite remained good, gastric and intestinal disturbances were absent. At intervals she consulted physicians for this general weakness without benefit. More recently she has been under treatment for renal trouble. About one month ago she states that the abdomen began to enlarge and this was followed by swelling of the lower extremities.

Present condition, Nov. 18th, 1901. The abdomen presents the typical appearance of ascites. Dullness extends to the level of the

umbilicus in the semi-recumbent position. The umbilicus is not prominent, nor are the abdominal veins distended. There is extensive edema of the lower extremities and the gluteal regions; none of the face or upper extremities. The area of liver dullness in the mid-axillary line reaches to the level of the nipple; the lower limit is uncertain. Examination of the chest is negative; cardiac sounds normal; examination per vaginam unsatisfactory. Urine is scanty, two pints in twenty-four hours; specific gravity 1028; reaction acid; albumen 5 per cent. bulk; few pus cells; abundance of fatty and granular casts.

Diagnosis—Cirrhosis of the liver. This appears at first uncertain. The history two years ago would indicate a right hydronephrosis, provided her statement is correctly interpreted. Neither the pain in the back nor the bladder symptoms recurred, still the general health remained impaired. This was doubtless due to hepatic changes, the collateral circulation almost but not fully compensating. Albumen was discovered in the urine and interstitial nephritis diagnosed. The next symptoms observed were the swelling in the region of the stomach, followed by swelling of the feet and lower extremities. This was due to ascites. The presence of albumen in the urine can be accounted for by passive congestion. There has never been any morning edema under the eyes, nor of the upper extremities.

Treatment: Diuretics, diaphoretics, and hydragogne cathartics were prescribed and continued until Nov. 30th, 1901, without improvement. Paracentesis was advised but declined. Iodide of potash was then substituted for the diuretics but with like result. On Dec. 30th paracentesis was made and about sixteen quarts of fluid removed. The edema rapidly disappeared from the lower extremities. By January 3rd, 1902, five days later, the abdominal cavity had refilled. Examination of the urine at this time showed no change. Dr. Ogden examined the patient and concurred in the diagnosis and in the advisability of surgical interference.

Operation. Jan. 9th, 1902. The abdomen was opened by median incision above the symphysis pubes to permit of a thorough examination of the uterine adnexa, and serve for subsequent drainage if deemed advisable. The ascitic fluid escaped in large quantity. Digital exploration revealed omental adhesions to the uterus and the appendages but no perceptible disease. Those adhesions were left undisturbed. Another incision was made parallel to the outer border of the right rectus muscle. The left lobe of the liver appeared nodular, the right smooth and extending below the costal arch. There were no

adhesions. The spleen was not examined. A large flat piece of sterile gauze was spread over the surface of the liver as far to the right and left as possible and the end brought through the upper angle of the incision. This was done with the idea of producing a maximum amount of localized peritonitis and subsequent adhesions over a large area of hepatic surface to the abdominal parietes. The omentum was caught up by the sutures closing the abdominal incision. Provisional sutures were left where the gauze drain protruded. The median incision was completely closed as there was no necessity for drainage at two points. A copious dressing of sterile gauze was applied under firm compression by adhesive strips.

The subsequent course was afebrile. Frequent change of the dressing was necessary because of the great amount of fluid discharged. The gauze packing was removed after forty-eight hours; a small gauze drain was introduced and allowed to remain for ten days. The discharge of fluid having by this time ceased, the abdomen was closed by the provisional sutures. The urine voided now measured forty-seven ounces in twenty-four hours. A saline cathartic was given daily. The ascites returned and on Feb. 10th paracentesis was performed. This was repeated one month later for the last time. Soon after this the veins at the umbilicus began to enlarge, forming a marked "caput medusæ." This caused her considerable trouble when in the erect position, and for relief she had to wear an abdominal support. Examination of the urine on July 3rd, 1902, showed a trace of albumen but no casts.. There was still some fluid in the abdomen. Six months later no fluid could be detected in the abdominal cavity and the urine was free from albumen. The veins around the umbilicus had by this time diminished in size and ceased to cause trouble. During all this time iodide of potash had been taken with saline catharics at intervals. Further medication was discontinued. On March 18th, 1904, there was present no recurrence of the ascites; the urine was normal in quantity; specific gravity 1020; no albumen or casts, some amorphous urates, leucocytes and squamous epithelium. The patient had regained her normal weight and ten pounds in addition. Her general appearance is that of health and she so expresses herself.

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Discussion.

Dr. Edward Evans, La Crosse: I believe there is very little to be said on Dr. Mackie's paper. All such cases as these, involving as they do a new surgical procedure, should be scientifically observed and carefully reported and brought before the profession, because they are still being tried on their merits. The objection to this operation, I believe, and one which will always remain until the pathology is cleared up, is that the operation is one done for a symptom only, for the ascites, and such an operation is scientifically unsound, of course; but ascites is not apparently always due to mechanical obstruction, because in these cases we sometimes find swelling of the feet before we get ascites in the abdomen. Then, too, the spleen is not always enlarged, as we would expect it to be the case if obstruction alone was the cause of ascites. M. L. Harris, of Chicago, has shown that in a certain number of those cases there is an early chronic inflammation of the peritoneum causing an effusion, which would make us hesitate as to whether we are on the right track in attributing it entirely to the mechanical obstruction.

The thing that should be done, if we hope for success in those cases, and to better the record, is to operate early. To do that we need better indications and must be more careful in our history and the scientific observation of those cases before operating on them.

Dr. H. A. Sifton, Milwaukee: It is not clear to me, and I do not think it has been made clear to those who have done this operation, that the improvement is due to an improvement in the venous circulation. I question that somewhat. In the first place there is quite a free anastomosis in all cases between the venous circulation and the portal circulation, at all times, even in the healthy condition, and how the cicatricial tissue is going to increase the venous circulation sufficiently to account for the improvement, is not clear.

One point that has not been brought out, and one that was not discussed, is, that the improvement is not so much due to the increase of the venous circulation as to some change in the lymphatic circulation. That very few of these cases show any improvement, only 50%, and that but for a short time, is established by the statistics of the operation up to the present time; but we are yet in doubt as to why the improvement takes place.

Dr. J. P. Connell, Fond du Lac: I wish to report a case which occurred in my practice some five years ago. A saloonkeeper consulted me in regard to his rapidly increasing ascites. I advised tapping him, to which he readily consented. Fourteen quarts of water were drawn through a trocar introduced in midline. About six weeks later I tapped him again, but on the side. A short time afterward I tapped on the opposite side; I noticed fluid did not run so freely as at first; something seemed to obstruct the canula. Fourth tapping had considerable difficulty in emptying the abdomen, after which time ascitic fluid did not increase as fast as at first, and finally, in six months from the first tapping, it ceased to accumulate. It is now five years since I tapped him and there is no appearance of return. He seems perfectly well and tends to business.

The point I wish to make in reporting this case is that by tapping him in different places I caused adhesions to the parietal peritoneum, and thereby

accomplished the result which we expect by operation. I have since tried this same procedure in one or two other cases but was not so successful.

Dr. Roswell Park, Buffalo: There is but little that I can add to what the doctor has so well said. I believe in the operation in selected cases of kidney conditions; but I believe we ought to get these cases earlier than we usually do. I do not believe in operating on moribund patients with Bright's disease or ascites. If we could get that happy condition of affairs brought about which I think is in sight, but has not yet come, when the physician and surgeon will combine early in the case and not late, and when the surgeon can do these operations early, the result will be much better.

I think the point made by the last speaker is a good one. I do not believe the benefit is entirely due to the venous rearrangement of the circulation, but from a combination of causes. I believe in this operation, if done early. It can do no harm and may do a great deal of good, and I feel a great deal the same way about operations on the kidney, in nephritis, and so forth.

Dr. C. O. Thienhaus, Milwaukee: I am sorry that I was not here when the doctor read the first part of his paper. I believe that the question of the scientific value of the surgical treatment of cirrhosis of the liver has been fairly settled by the statistics of operated cases reported by Greenough in the December number of the *American Journal of Medical Sciences* of 1902. After rejecting all doubtful cases, Greenough could collect 105 cases of cirrhosis of the liver in which Talma's operation had been performed. He found that of these 42 per cent. were benefited by the operative procedure, in 58 per cent. no benefit at all was derived from the operation. Within the first 30 days following the operation there died 29½ per cent., and after two years only nine cases were still well. When we consider that surgery is not only there to cure, but to benefit if a cure is impossible, one will naturally do this operation because in many cases doubtless a decided benefit has been derived from it. In regard to the technique of the operation it has been shown that the results are invariably better when you not only suture the omentum to the peritoneum of the abdominal wall but implant it within the muscularis of the wall.

There may be some truth in the remarks of Dr. Sifton, but the consensus of opinion has been that the result is established by the alteration of the circulation.

Dr. William Mackie (closing): The increased circulation through the newly formed adhesions may not account for the relative cure. That there is a greatly increased collateral circulation through these adhesions has been absolutely demonstrated by Morrison. You relieve the congested condition of the liver and probably retard, or even arrest, the formation of the new connective tissue. As to the diagnosis between a chronic peritonitis and cirrhosis, if all other means fail, an exploratory incision is accompanied by very little risk.

MEDICAL ETHICS.*

By J. L. CLEARY, M. D.,

KENOSHA.

Ethics may be briefly defined as consisting of rules of human action. The code of ethics of the American Medical Association is supposed to contain the rules for the guidance of the individual members of our profession. With that code I shall assume you are familiar. I am pleased to state that there seems to be a general feeling manifested by a large portion of the more enlightened and progressive members of our profession, that the general welfare of medical men needs united action in order to elevate and preserve the dignity of our calling. That our profession does not occupy that position in the public mind to which the intelligence and character of its members justly entitle it, is too plain to us all.

Within a few years the establishment of laws in the United States regulating and defining the requirements of medical practitioners has changed or unified the ethical standing of those practicing the healing art. Schools or fanciful theories can no longer serve as a cloak for ignorance. The State wisely demands that those who attempt to practice medicine shall possess a minimum of scientific acquirements in the subjects usually considered as including the medical field.

Is it wise for a body of educated men, examined and licensed by the state, to war among themselves and thereby acknowledge to the dear people, ill or well, that, notwithstanding all of our scientific progress, prejudices of an ignorant age still survive?

Men possessed of common sense know full well that demonstrated truth is not accepted or rejected at the will of a normal individual. As medicine is a progressive science and is still in its infancy, and when we compare the known facts upon which we can all agree with those numerous speculations which await demonstration to establish certainty, is it not time that we turn over a new leaf, and extend the hand of unreserved fellowship to all legally qualified practitioners? It seems to me that this is a preliminary step before we can consider the subject of medical ethics at all. The country over men of all schools have for years consulted together except in individual cases. Warring brethren have brought contempt on the profession, until a

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suffering public cries out for relief from such strifes over the dying and suffering victims of disease.

The unrestrained chaotic state of medical practice in the first century of our country's development has left a legacy of uncharitable feeling among our professional brethren, which an enlightened public considers with contempt. I have had many men commend to me the young man who spoke well of his older professional brethren, and who explained the modern treatment as compared with former methods no longer approved as not due to individual incompetence of men of the past, but to modern enlightenment, brought to its present advancement largely by the arduous labors of those very pioneers whose books are mile posts on our shelves to-day. To some of us who enjoy the meetings and society of our professional brethren it is unaccountable why so many neglect to join our medical societies. If we could come together often and discuss our needs and even our cussedness we certainly should be able to find out that we are very much the same as other human beings; that we are a part of human society because there is work for us to do; that our share of that work does not come to us, because of the weakness or shortcomings of our neighbors, or because we are able to do a mean turn to a medical brother, but rather that we are competent, as our medical neighbor is competent, when we are called to minister to the diseased.

There are so many things needed before we can put our medical household in practical ethical order, that I fear I shall fail to do that which my heart is bent on doing, and that is to point out a practical step of advance at this time. First, I would like to emphasize the point that medical contention, whether between schools of practice or individuals, always diminishes the general capital of the profession, by lessening the public confidence. Then the first thing we should try to do, is to bind ourselves not to dishonor our profession by intimating to the people that many medical men are unworthy of their confidence. If we have any doubt about our competitor's ability, is it not more honorable to throw the mantle of charity over him for the time being?

The State Medical Society has sent out a new constitution that is proving a stumbling block to some. The manner of dealing with special dogmas of irregular schools is not by any means settled to the satisfaction of all. The public cannot and will not understand why men qualified by the laws of the state to practice medicine in all its branches, should be excluded from membership in the regular medical society. Before the state required evidence of a satisfactory

medical training, societies might with some show of reason have set up a standard of their own. But now there remains only a question of dose, and sometimes not even that. It should be borne in mind that there are prejudices to overcome on both sides, and if they can be laid aside for a time, association may remove the difficulties. I cannot believe there is dishonesty on the side of the exclusive dogmatist. In fact, I know that men could not more firmly believe in what they hold than many of them do.

Let us endeavor to induce every man to join a local or county society and thus cultivate a more intimate acquaintance. It is not easy to formulate any method as to the best means of doing this. It will take time, perseverance, patience, and maybe the combined ingenuity of all active members to induce some to join the county society. Society members should try at proper times and seasons to have attractive social features that do not involve too much time and expense, and thus bar many from partaking. Men are not all of the same bent of mind, some take a deeper interest in particular subjects than others. To the ambitious young man the showy and definite results of surgical and gynecological operations open a very desirable field. But specialists are best developed after some years of practical work. The general field of practice is wide open for advancement and invites the enthusiast to specialize therapeutically in rheumatism, hysteria, insanity, and varied nervous disorders. True, it will require renewed endeavor to work along these new lines, but I wish I could impress on the minds of all our medical brethren that the scriptural injunction not to try to injure or overreach our brother in business would work so much better for us all.

There is no body of men that has done so much for the public good in an unselfish manner as the physicians. Their great endeavor has been to prevent disease rather than to cure it. And still too many of the people think that the doctor is a clever money getter. Why the doctor does not hold the place in the public mind which he deserves, is pitiful indeed if it is due to anything inherent in the great body of medical men themselves. I fear that jealousies have done more than we are aware of to encourage distrust. If we in our daily lives intimate that there is only one doctor in town worthy of trust, how can we blame the public for a mistrust which we worked so hard to disseminate?

But if we are to set about unifying the profession we surely should go about it in a way that is likely to win. Terms and conditions should not be made by one organization where there are three

to unify. Our state medical legislation was held back for years until the regular society conferred with the eclectic and homeopathic societies and consented to give those societies representation on the Board of Medical Examiners. If a similar conference had been held by those same societies, our State Medical Society would not have to wait a year, or perhaps two, to find that one section of our present constitution of the State Medical Society was objectionable to so large a number of our "special dogma brethren," so that anything like a satisfactory union is impossible.

Now every licensed physician in this state belongs to the profession of Medicine, if not by our efforts, at least with our approval. As Dr. M'Cormack, the organizer of the American Medical Association said, they all belong to us by statutory law, and it is our duty to take care of all, but more especially to look after those likely to stray from the path of ethical rectitude. This cannot be done by methods of dictation. In fact, we have no species of coercion leverage at our command to force men into a society. And with a learned profession no such influence should be needed. Make our county societies what they should be and it will be a disadvantage to any man to stay out because of carelessness or indifference, and he would surely suffer loss of prestige before an enlightened public.

A GLIMPSE INTO THE PAST, PRESENT AND FUTURE OF THERAPEUTICS.*

BY S. R. MOYER, M. D.,
MONROE, WIS.

In these progressive days there is a tendency to conduct the practice of medicine more and more upon a commercial basis, as well as in a more systematic and business-like manner. The competition to succeed (professionally as well as to get along financially) is just as keen, though perhaps not so apparent to the public, as in other vocations. It is well, therefore, that we apply a customary business procedure to our work occasionally and take an inventory, as it were, to see where we are at. This can best be done by analyzing and placing

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a proper estimate upon the quality of work we are doing in the present, compare it with that of the past, and at the same time speculate as to whither we are drifting in the future.

It is far from idle pastime to indulge in a retrospective glance occasionally, and to scrutinize the past attainments in any one branch of medicine and note the various changes, the successes and the failures, that have been the means of transforming our art and science into its present stage of perfection or of imperfection. In fact, in no other way than by an impartial comparison of present methods with those in vogue in the past, can we fully appreciate the nature and degree of our present achievements and be able to faintly apprehend what the future is likely to produce.

In my opinion no other department of medicine offers a more fruitful or profitable field for speculation and reflection than therapeutics. The healing of the sick by the application of remedies comes to us with the earliest pages of history, and it is strange, indeed, that this of all branches of medicine, the most important to suffering humanity, should after so many centuries of observation and experience be in such a chaotic and unsettled condition as it is to-day. It is, however, an evident and a greatly deplorable fact that therapeutics has been and is to-day the least creditable to the profession and that it has made the least satisfactory progress of any of the medical branches.

The history of medicine shows that all departments do not progress hand in hand. First one branch is in the ascendency and holds the attention of the entire profession for a long time, then another is taken up and independently developed, and the neglected branch becomes the opprobrium of the profession.

In studying the history of medicine during the last half century when such substantial progress has been made in nearly all the other departments, we find that therapeutics has not received the scientific attention it deserves. In fact, it has never had its inning; and by reason of this neglect it has not kept pace with the advances made in the other branches, and is, therefore, the rock upon which our faith in the whole science of medicine has so frequently been shattered.

Even at the present day, it is the fashion of some men eminent in the profession, to belittle therapeutics and depreciate its value. The surgeons ignore it, and it is stated that there are not a few eminent medical men who are in favor of omitting the chair from our medical colleges and of doing away with the section in the American Medical Association.

Why this indifference to therapeutics by a portion of the medical profession exists is hard to understand. It certainly is the first thing a student must put to practical use after leaving his college and coming in contact with suffering humanity, and his success in his calling is apt to be in proportion to his ability to prescribe intelligently. His patients will not be concerned and will not question as to how much he knows about physiology, pathology or bacteriology, but they will be directly interested as to what he can do for them by way of curing the ills with which they are afflicted.

Those of us who were in the practice of medicine as long as a quarter of a century ago, can well remember the wave of therapeutic indifference that swept over the medical world at that time, and which has had a damaging effect on the progress of therapeutics to this day. This so-called therapeutic nihilism had its origin in the older seats of medical learning in Europe. Pathology at that time was the chief attraction and absorbed the attention of the entire profession. Every body was peering through the microscope. It is said that a postmortem examination in those days which proved that the diagnosis of a pathologist was right, created more enthusiasm than a score of recoveries which proved that he was wrong.

I remember an instance that occurred during my student days while studying medicine in the office of my preceptor, the late Dr. W. S. Caldwell, of Freeport, Ill., who, I wish to add, was more than ordinarily successful as a general practitioner of medicine as well as surgery, and will further add for the benefit of those who are inclined to measure success in our calling by the amount of wealth he has accumulated, that he died leaving an estate valued at over $400,000.00, earned entirely in the practice of medicine, and almost exclusively by dealing out medicine to all who applied. One day, shortly after his return from a trip to Europe, he called us into his drugroom, where he was taking down bottle after bottle of drugs, that he had formerly been accustomed to prescribe, until there were scarcely a score remaining. He directed us to store away the rejected drugs, and, pointing to those remaining on the shelves, remarked that those were all the remedies he would have any use for in the future; that his ideas as to the use of drugs had been revolutionized, and that henceforth he would use fewer remedies, devote more attention to pathology, be more sure of the diagnosis, and leave his patients in the hands of nature and an all-wise Providence to cure them of their maladies. He further took occasion to give us an interesting synopsis of the condition of internal medicine in Vienna at that time, where

he had spent the greater portion of six months attending the clinics of the then famous Bamberger. I was particularly impressed with the statement that this eminent clinician would almost invariably take from one hour and a half to two hours delineating the pathology of a single case, and would dismiss the subject of its therapeutic management in less than two minutes. We were not a little surprised at the statement that the whole number of remedies this distinguished instructor prescribed during an entire course, could have been counted on the fingers of both hands. We were still further surprised when upon our return to medical college a few months later on, we were obliged to go through the torture of memorizing a whole volume of therapeutic remedies, together with their dosage and supposed physiologic action, of which there were usually several conflicting opinions given by the different authors, and then to be told by our learned professor after we had reached the end of the volume, that drugs after all were very inefficient remedies, and not to be relied upon; that our patients in the large majority of instances would be better off without them; that most diseases were self-limited, and if left alone would tend towards recovery without the use of drugs; in short, that nature would cure all things curable.

Is it any wonder that upon leaving college we had not only a very confused knowledge of the application of therapeutic remedies, but that there was implanted in our minds a lack of faith in the efficacy of all medication, which proved to be, as we afterwards ascertained, a very poor foundation with which to begin the high calling of the practice of medicine, and which also proved a serious hindrance to acquiring a more thorough knowledge of the scientific application of curative remedies later on in our professional careers.

I question very much whether the medical colleges of to-day send forth their students any better equipped with a practical knowledge of therapeutics than they did twenty-five, or even fifty years ago. Indeed, it is conceded that the average recent graduate, while he possesses more theoretical knowledge obtained in various laboratories, is more sadly lacking in clinical experience and the application of remedies than any that have preceded him, and as he takes up the practice of medicine he is obliged, in a great measure, to construct his own therapeutic pathway by the painstaking, though oftimes dear and disastrous method of individual experience gained while in actual practice.

You are all aware that during the last decade surgery has been the chief attraction. It has not only absorbed nearly all the attention of

the profession, but has invaded the territory of internal medicine to such an extent that it seemed for a while as though we would have no further use for therapeutics in the future, and that it was destined to become one of the lost arts. It looked for a time as though the good old-fashioned physician, with his well equipped therapeutic armamentarium, and his wealth of clinical experience, would be put entirely out of business. In fact, it even now looks as though the general practitioner of regular medicine has but little hope for the future, after being compelled to divide honors with the homeopath and the osteopath of what little there is left after the surgeons and the specialists get through.

Recent indications, however, point to the fact that the acme of the triumphs of surgery has about been reached, for every organ of the body has been invaded, and, as we heard this forenoon, the surgeons are turning their attention to the external parts of the body and are attacking the moles and warts, and that in the future, as we advance in scientific therapeutics, a portion of the field now claimed by the surgeons will again be encroached upon by the internist. The prospect for therapeutics is becoming brighter. Internal medicine is taking on a wider field and implies more than the mere internal administration or local application of drugs. During the past few years, since the etiology of disease is better understood, the profession is on a new therapeutic trail, and we have already in a few instances like diphtheria and tetanus, sufficient evidence to show that it may be possible in the dim and distant future to elevate the art of therapeutics to the dignity of a science.

For the present, however, the general practitioner, in the treatment of most diseases, must, as heretofore, be content to follow the well-beaten path of empirical therapeutics, and use what remedies he has until other and better ones are placed in his hands. We are not as yet far enough advanced in rational and scientific therapeutics and specific medication to warrant us in doing away with all those remedies for the use of which we can give only empiric reasons. Much disappointment, if not positive harm, has often resulted because the physician has been too eager to utilize and popularize some new idea of modern therapy before it has been fully elucidated, and made practical by its discoverer. It is good policy for us as general practitioners to stick to that which has been thoroughly tested and tried, and in our search after new remedies to carefully discriminate between the genuine and the counterfeit, and to be sure not to overlook the val-

uable properties possessed by some of the standard agents of our materia medica, before we discard them for the new and the untried.

Thus far, outside of a few infectious diseases, the number of which could be counted on the fingers of one hand, all the modern aids to therapeutics, the science of bacteriology, pathology, and a fairly well developed system of rational therapeutics, have contributed but little practical assistance to the busy practitioner in the treatment and cure of internal diseases. How much better we can treat pneumonia since the bacteriologist has introduced us to the pneumococcus, the appaling mortality of that disease during the past season will testify; or, how much better we can avert, cut short or abort a case of typhoid fever, or cure consumption since we know the causative agents producing them, mortality records will show.

Nowadays, as never before, there is a tendency to follow fads in medicine, and the over-credulous and long-suffering public is only too willing to be experimented upon. The people no longer recognize the necessity of a family physician and trust him as a medical counsellor and guide, and profit by his experience and advice concerning their ailments and the manner in which they should be treated. They are, as never before, clamoring for drugs and surgical operations. In fact, drugging is popularly considered to be the chief business of the physician. The doctor who does not give something in every case whether it is needed or not, is accused of inattention.

During recent years surgery has fascinated the public. It has grown to be the prevailing sentiment, especially among the gentler sex, that an operation is the thing for almost every ailment, however insignificant; and it is a well recognized fact that our surgical friends have thus far made but little attempt to correct this erroneous impression. If they have, the general practitioners in the rural districts have not yet heard of it.

Not long ago two ladies belonging to well-to-do families in a thriving Wisconsin city met casually on the street, and the conversation naturally turned to the condition of each other's health. Says Mrs. A——, "Oh, I am much better, but I had to change doctors. I was obliged to discharge our old family physician, because he did not seem to understand my case. He told me there was not much the matter with me and that I would be better off without much medicine, so I sent for Dr. Dopemall and the very first time he came he gave me six different kinds of medicine, granules, he calls them, and I tell you he is quite swell," to which Mrs. B——, with an air of superiority, replied: "I am sorry for you, Mrs. A——, but taking medicine is not

the thing nowadays. Operations are all the go. I had two last year, and if my family physician can get me well enough, I will go to Chicago again next month and have another."

We trust the time is not far distant when the physicians will have enough courage and independence to resist catering to the whims of the public in regard to the wholesale swallowing of drugs, and I might add, the surgeons enough honesty to limit surgical interference only to those cases where it is absolutely necessary. Not only are fads in medicine eagerly sought after by the laity, but a large proportion of those inside the profession do not always recognize the absurdity of hobbyism and are constantly adopting some pet remedy or chasing after cure-alls, or fads in treatment which promise everything and accomplish nothing.

Not very long ago I was accused by one of my worthy competitors of being a therapeutic pessimist because I denounced a highly over-advertised remedy of a proprietary nature as being of doubtful therapeutic value, and questioned the propriety of a physician using the same.

It is true we have often had cause to lament our lack of faith in the power of drugs, and have often longed for more and better evidence of the little faith that is in us; yet at the same time we are not satisfied to look for hope and inspiration to the doctor who forsakes his scientific text-books and other scientific literature and depends almost wholly for his therapeutics on the information which he gets from the literature sent out by the manufacturers. A wholesome amount of skepticism is certainly preferable, and evinces better judgment than an unwarranted enthusiasm over a new remedy that can lay no other claim for recognition than an incomprehensible and impossible formula attached to the label, together with the recommendations for its use as given by the man who makes it. I have always been opposed to any hap-hazard or unscientific medication, and have always been of the opinion that the mission of the physician is a wider one than to be a mere distributor or dispensor of ready-made proprietary articles. In fact, nothing is easier than to give such remedies, for we find the therapeutic instructions for the same on the back of every bottle, placed there by the man who makes it.

If it is true, as some one has thoughtfully said of the nearly 19,000 preparations listed in our U. S. Dispensatory, "that it were better for the profession if nine-tenths of them would find a resting place at the bottom of the sea," what can we say of the almost 99,000 of new remedies outside of the dispensatory, that are daily being brought to the notice of the profession?

Every manufacturer is hot on the chase of some new combination, or some new synthetic product with which he expects to victimize the medical profession. How well he succeeds is abundantly evidenced by the large amount of wealth he is constantly piling up, made possible by the patronage of a gullible medical profession. Is it not humiliating to see a physician of a score or more years of experience, a graduate of a regular medical college, who by virtue of his calling is supposed to have acquired a thorough knowledge of materia medica and therapeutics, give attentive audience to a youth with the down not yet removed from his upper lip, a representative of some manufacturing establishment, while he obligingly volunteers to instruct him how to treat his patient and recites a cleverly worded and exaggerated and wholly fallacious account of the wonderful curative properties of his preparation, and generally winds up by producing an array of testimonials, reputed to be, as they often are, from some reputable physicians who "are using it in five gallon lots;" and what is worse, to see the youth depart with an order and a liberal contribution of the doctor's hard earned cash, for what? For a compound the like of which he has already in the office in various combinations. The doctor, however, crowds the newly bought articles into his already over-filled medicine case and too often dispenses the same to the very first patient that comes along, while it is fresh in his mind and before another agent sells him something else.

This is not all fancy. The manufacturers are piling up enormous wealth, the physicians are contributing the money and the long-suffering and accommodating public is expected to swallow the drugs.

Dr. William J. Robinson, of New York City, in a paper read before the section of Materia Medica and Therapeutics at New Orleans last year, depicts the evils of nostrum prescribing so impressively and illustrates it so forcibly with a case that I can do no better than quote the following which he gives by way of preface to his paper:

He writes: "Some weeks ago, a young lady came to me to consult me about an obstinate headache. 'I have used everything you can think of,' she said. 'I have used antikamnia, Kohler's headache powders, ——'s migraine tablets, orangeine, Hegeman's headache wafers, and a lot of other things. At first they used to relieve me, but now they don't do me any good.' The self-drugging young woman enumerated five different articles which she had used; different articles in name, but identically the same so far as composition is concerned. Everyone of those articles consists of acetanilid, sodium bicarbonate and a little caffein."

"About two weeks later a young practitioner approached me with the following words: 'Doctor, I wish you would recommend me something good for dysmenorrhea. I have an obstinate case for which I tried everything you can think of.' 'What did you give her?' I asked. 'Oh, I gave her antikamnia, phenalgin, salfene, phenobromate and all the various combinations recommended for dysmenorrhea. They have a slight effect, but only temporary.' Here we have a physician, a man who paid out a thousand dollars in tuition fees in a medical college, who does exactly the same thing as the ignorant young woman; that is, he prescribes for his patients things of the composition of which he knows absolutely nothing. All the nostrums he enumerated contain acetanilid as their chief and principal ingredient, and he did not know it! A professional man, and he did not care to make the least investigation into the nature of the drugs he prescribed! Had he done so, he would have spared himself the trouble of prescribing the same drug over and over under a different name, and his patient's sufferings might have been alleviated by more rational treatment. How can we blame the laity for self-drugging and swallowing mixtures of which they know nothing when regular physicians are doing the same thing right along."

The whole of this paper of Dr. Robinson's I would recommend to your attentive perusal, and trust that that portion relating to the advertising of these nostrums will sink especially deeply into the hearts of those who have in charge the control and guidance of the advertising pages of our reputable medical journals. He further says: "How any respectable medical journal can admit such articles as, Emissine, Sannetto, California Fig Syrup, Roberts-Hawley Goat Lymph, Manola, Nervilla, Seng, Chionia, Ecthol and Antikamnia is beyond my comprehension," and he especially refers to the highly-advertised product called antikamnia, and uses it as an illustration to show the enormous profits made by the manufacturer. He says: "This secret nostrum, as has been shown hundreds of times, consists of acetanilid, sodium bicarbonate and caffein; its cost, as it is found on the market, is about three cents per ounce and the manufacturer sells it for sixteen dollars a pound. The public and the poor druggists pay the price and the manufacturers make their millions." Any sane man will certainly admit that this is paying a pretty dear profit for the name of an article of no special therapeutic value and whose extensive use by the public for the purpose of self-medication has been productive of much harm.

It is very evident that this slip-shod method of nostrum pre-

scribing by the medical profession is a more serious hindrance to the progress of rational and scientific therapeutics than anything else we have to contend with, and the very existence of this pernicious practice is laid largely at the door of our medical colleges and our medical journals. We can, therefore, look for no correction of this evil until the subject of therapeutics is better taught and the advertising pages of our medical journals cease to aid and assist the wily advertisers in their endeavor to mislead the over-credulous portion of the medical profession.

Notwithstanding the present large amount of irrational and unscientific dosing, the outlook for the future is hopeful. Rational therapeutics is bound to displace senseless nostrum medication. With our increased knowledge of morbific processes, and our more exact means of diagnosis, the therapeutist of the future will be better able to apply his remedies with a precision heretofore impossible.

Furthermore. the physician of the future will be better able to lessen human ills by preventive medicine, by paying more attention to the rules of sanitation and the proper hygienic and dietetic treatment of his patients. In fact we are at the beginning of the dawn of a new therapeutic era, and we can hopefully anticipate almost miraculous surprises by way of future discoveries along the lines of organo- and serum-therapy, to say nothing of the most extravagant conceptions regarding the X-ray and radium as therapeutic possibilities. "We have already gone far and established much," and recent discoveries encourage the hope that ere another decade is past, the general practitioner will have placed in his hands agents by which he can as effectively combat the ravages of consumption and cancer and other diseases, as he already can those of diphtheria, rabies, blood-poisoning and other infectious diseases.

But the mills of the gods grind slowly, and, while waiting for the development of this knowledge, let us, as reasoning and scientific physicians, in those instances where modern therapy is not yet applicable, endeavor to more intelligently apply the therapeutics of our fathers. We have the advantage of the increased light of bacteriology, a better knowledge of etiology, and, in addition, we are able to more fully recognize the limitations of diseases and the impossibility of curing or aborting them with drugs, and are, therefore, more justified than ever in placing increased dependence and confidence in the curative powers of nature; we must realize more than ever that our best efforts should, at all times, be put forth in assisting nature's processes, at any rate to be sure and not retard them by meddlesome interference with drugs.

The longer we are in practice, the more are we convinced that the old physician, who, when he came to his wits' end, and instead of firing away at random, allowed all drugs, theories and therapeutics to rest while he gave his patients an opportunity to get well, was wise in his day and generation.

Chorea.—W. G. SPILLER, Philadelphia (*Journal A. M. A.*, Feb. 11), thinks that the relation of chorea to rheumatism has been greatly overestimated. In most of his cases he could not detect it. He also has not been able to recognize any peculiar facies of the disease, nor does he agree with Gordon and Eshner that there is any peculiar characteristic of the patella reflex in chorea. The arsenical treatment of the disease does not seem to be without disadvantages and should be watched very closely. He has seen arsenical neuritis and idiosyncrasy. The pathology of the disorder is still obscure. The "chorea bodies" are not characteristic. Apoplectic hemihypertonia is distinct from athetosis; the spasm is tonic, unilateral, associated with a little weakness, but not with contractures, develops after an apoplectic attack, and is probably due to irritation of the motor fibers below the cortex.

Prostatectomy.—In the weakest and most run-down cases M. B. TINKER, Ithaca, N. Y., (*Journal A. M. A.*, February 11), has employed permanent suprapubic drainage. This is rapidly performed under cocain, and he thinks it is the safest of all procedures. Except in absolutely desperate cases, he believes prostatectomy under local anesthesia is safe as compared with the operation under general anesthesia. The use of adrenalin with the ordinary local anesthesia greatly prolongs and adds to its efficiency, prevents the pain and congestion following, and renders the operation almost bloodless. The knowledge of the nervous anatomy of the parts is, of course, absolutely essential, and the course of the pudic nerve and the long pudendal nerve close to the base of the tuberosity of the ischium are important. He favors the use of Young's tractor, and recommends allowing sufficient time for the anesthetic to act before making the incision. With sensitive or nervous patients he finds it often better to use a little nitrous oxid gas or primary ether anesthesia, as the infiltrating solution can not reach the parts involved in the deeper enucleation. These parts, however, are supplied by the hypogastric plexus of the sympathetic and the discomfort is not necessarily great. He reports a case in which he thinks this method of operation was directly life saving.

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EDITORIAL COMMENT.

TRANSPORTATION OF INSANE.

The laws of Wisconsin relating to the transportation of insane persons to the State Hospitals are antiquated and semi-barbarous. After a person has been adjudged insane he is delivered to the sheriff, who often locks him in jail until it suits his convenience to make the journey to the hospital. Horse thieves and other criminals have exactly the same treatment.

The judge who orders the commitment should notify the hospital authorities to send trained attendants to convey the patient to the

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hospital. This is the method in use in enlightened commonwealths, and it is time for Wisconsin to get in line with the progressive states and discard her offensive laws.

The delivering of insane men and women to the sheriff is expensive and unscientific. The sheriffs have not been trained in the management of the insane.

A stigma attaches to the execution of this law by a sheriff. The criminal is at once in mind.

For the sake of decency, economy and humanity, the legislature should at once amend the insanity law, so as to put the entire charge of insane persons in the hands of the hospitals.

TRIAL BY JURY.

The whole process of determining the presence or absence of insanity is a relic of ancient times and should be modified.

The law provides an insane person can demand a "trial" by a jury of six citizens. A more absurd proceeding cannot be found outside a comic opera.

The "trial" of a man for gall stones or a woman for endometritis would be just as rational.

The jury is a fetich that is worshipped by the legal profession.

The learned or unlearned judge, the freak judge, the asinine judge, the bigoted judge, the prejudiced judge, the timid judge, or whatever manner of judge happens to be sitting in judgment, directs the jury to determine the question of insanity.

A jury of bankers and barbers and butchers can diagnose any case of insanity on sight.

A case where Kraepelin would hesitate to declare a diagnosis. a Wisconsin jury can settle without leaving the box.

What can be more absolutely foolish?

Why not have a jury to decide whether a case of sarcoma is operable or inoperable?

The whole question should be taken from the judges, the juries and the sheriffs, and settled by the medical profession.

The president of the County Medical Society and a committee of the society could easily be made the proper tribunal for this work.

Now that the profession is organized, it ought to grapple with such subjects, assert its rights and have the power and emoluments to which it is entitled.

Physicians have always been marionettes for lawyers.

Now is the time to begin to extricate the profession from the false and unworthy position it has hitherto occupied.

STATE BOARD OF MEDICAL EXAMINERS.

We would call the attention of our readers to a letter from the Secretary of the State Board of Medical Examiners *in re* the matter of medical legislation, printed in this issue of the JOURNAL. Inasmuch as the labor of the Board is an evidence of unselfish devotion to the high principle of public welfare, we feel that the Board's recommendations ought to receive the support of every right-minded physician in this state, and we bespeak for it a careful perusal.

COURSE OF INSTRUCTION IN PUBLIC HEALTH.

The University of Pennsylvania offers, beginning with October, 1905, a course of instruction under the above title. We believe this innovation of sufficient importance to deserve attention in these columns. It is unquestionably true that few who are called upon to undertake the work of caring for the health of a community, have had the opportunity or have found a need of acquainting themselves, by thorough study, with the duties of such a position, prior to their acceptance of office. This being so, we may point with pride to many incumbents of the office of Commissioner of Health who have thoroughly familiarized themselves with the duties of the position, and have given their communities excellent service.

However, now that the cry is prophylaxis rather than treatment, there is unquestionably need of a class of men duly qualified by reason of special training, to assume charge of the sanitary problems confronting all large and progressive communities.

The course offered by the University of Pennsylvania will include the following subjects: Sanitary engineering; sanitary legislation; inspection of meat, milk and other animal products; the sanitary engineering of buildings; social and vital statistics in the United States; practical methods used in sanitary work; general hygiene and personal hygiene.

The introduction of this course to the regular curriculum of the University of Pennsylvania will undoubtedly better qualify the graduate for work along the line of public health and sanitation.

Retain your State Society membership by paying your County Society dues now.

A MEDICAL BOARD'S PLIGHT.

A recent decision of the Colorado Courts shows how rough is the road to success in matters of medical legislation. A graduate of an Institute of Osteopathy, who employed the term "Dr." in a medical sense, but refused to submit to an examination by the State Board, was thereupon indicted for practicing medicine without proper license. Evidence was obtained from a man who went to the osteopathist with a complaint of asthma. He was told, upon thorough physical examination, that he was suffering from a displacement of one of the bones of the sternum, and that it would take at least a year to cure him.

The indictment was quashed upon motion of defendant's attorney "upon the grounds, among others, that the terms used in the statute, to-wit, "Any person . . . . who shall profess publicly to be physician and prescriber for the sick, or shall attach to his name the title 'M. D.' or 'Surgeon' or 'Doctor' in a medical sense, are too vague, ambiguous, indefinite and uncertain to sustain a conviction;" . . . . "and that the further facts alleged in said information, as to the examination and treatment of Stiess by defendant, do not constitute the practice of medicine."

Upon the declaration of the secretary of the State Board of Examiners, Dr. Van Meter, that he would continue the prosecution of unlicensed osteopaths until the above ruling was upheld by the Supreme Court, because this ruling was in opposition to previous decisions of the Supreme Court of Colorado and other states, a suit for malicious persecution was brought, and plaintiff was awarded damages to the extent of $700.

The case is now before the Court of Appeals, and we follow the trials of our Colorado brethren with much interest and concern.

So long as the giving of drugs or the actual performance of a surgical operation are considered essential in the legal interpretation of the phrase "practice of medicine," so long will this battle for proper restrictions as applied to healers and misrepresenters of all kinds prove a losing game.

THE DISPENSARY AND HOSPITAL ABUSE.

One of the difficult problems encountered by dispensers of medical charity, has been and is that of exercising proper and just discrimination in answering requests for gratuitous medical service. While there may be some means of determining a patient's ability to pay a fee for hospital care in many cases, there is no way in which

the interests of the practicing physician are safeguarded in the case of dispensary patients.

In our own city (Milwaukee) dispensaries are few and their abuse exists only in isolated cases; nor is their patronage so great as to make them a factor detrimental to the practicing physician. Furthermore, dispensaries are necessary adjuncts to medical colleges, and invite material for purposes of instruction. In all our largest cities, however, the dispensaries are numerous, their patronage large, and their abuse is a matter to be reckoned with. It is no exaggeration to state that fully one-third of those who apply and receive gratuitous advice are fully able to pay a physician for his services. Unfortunately, but few institutions have the moral courage to refuse treatment to those applying.

One of the most flagrant instances of this abuse is at present agitating the Michigan profession. It seems that material for teaching purposes at the University of Michigan, Ann Arbor, has been running low. Instead of devising some better plan whereby this could be remedied, an edict was issued by the University authorities to the effect that every patient, be he rich or poor, who applies for treatment, whether surgical or medical, and who is willing to pay seven dollars per week board, must be treated free of charge by the college professors. This has quite naturally aroused the indignation of the physicians of that state, for patients from rather distant parts find it cheaper to pay their railroad fare to Ann Arbor, plus seven dollars per week, and be treated medically or undergo operations by men of high standing, than to pay their home physicians of less renown for similar services. The physicians have found that this unfair competition is doing them great damage, and the college staff has also protested—and very rightly—at a practice devoid of any sense of justice, and one so conducive to pauperization at the expense of the hard-working doctors. So general has been the protest against this indiscriminate dispensing of professional services, that plans are under way to devise some other means, less inimical to the physicians' interest, whereby more of the really deserving may be brought to the institution to supply the need of material for medical instruction.

The resolutions condemnatory of the action of the trustees of the University of Michigan passed by numerous county societies, are evidence of the strength that lies in thoroughly united and well-poised professional organization.

Membership dues for the State Society are now payable.

EXTRA-GENITAL SYPHILIS.

The danger to the physician of contracting extra-genital syphilis is not more apparent than real. Blaschko (*Berliner klinische Wochenschrift,* Dec. 26, 1904) reports having treated 12 physicians who had acquired the disease. In almost all cases the fingers were the primary focus, and the infection seems in the majority of instances to have been through wounds received in operations and in the course of gynecologic work.

It is well for physicians—who are proverbially careless in matters that concern their health—to give heed to the warning contained in a report of this character. Syphilis, extra-genitally acquired, is none the less a disease to be dreaded, and this danger ought to be borne in mind in operative work, and especially in gynecologic examination, where concealment of infection, willfully or innocently, is so readily effected.

NEWS ITEMS

The Annual Report of the Children's Free Hospital of Milwaukee shows that 227 patients were admitted during the year 1904. Of these 90 were medical, 60 surgical, 24 ophthalmological, 26 dermatological, and 27 ear, nose and throat.

There were 15 deaths during the year as follows: Malnutrition 3; broncho-pneumonia 2; lobar pneumonia 1; subacute nephritis, gastroenteritis, inanition, marasmus, miliary tuberculosis, influenza, extensive burn, each 1.

196 patients were discharged during the year, and 38 remain in the hospital for further treatment.

The Law and the Doctor.—The Arlington Chemical Company has published for gratuitous distribution, volume 2 of the "Law and the Doctor," entitled "The Physician as Witness." We commend this firm upon the publication of a brochure that contains in very compact form much that is of interest to the physician. This volume treats of the examination and cross examination of witnesses, rules covering evidence, privileged communications, expert evidence, fees, etc., and will doubtless prove of considerable value to the physician who may at any time be called upon to act as witness or defendant in a suit.

Dr. Storrs Hall, who practiced medicine at Rosendale, Wis., for nearly half a century, died at the residence of his son, Dr. S. S. Hall of Ripon, January 13, aged 91 years. Dr. Hall was probably the oldest physician in the State of Wisconsin, was in active practice until he reached the age of 85 years, and was greatly interested in his profession up to the day of his death. He served from 1860 to the end of his life as a trustee of Ripon College, and in every way was regarded as one of the most progressive physicians and public spirited citizens of the state.

State Tuberculosis Sanitarium. A bill has been introduced in the Wisconsin Assembly by Mr. Kinney providing for an appropriation of $90,000 and a yearly maintenance fund of $25,000 for the establishment and maintenance of a state sanitarium for tuberculosis. The bill provides that the

institution shall be governed by an advisory board of five members, in conjunction with the State Board of Control. No site has been selected. This bill is the outgrowth of the work of the State Tuberculosis Commission appointed two years ago.

The Wisconsin Health Park Association.— Dr. Roberts of Janesville, the secretary of the Wisconsin Health Park Association, the object of which is the establishment of a sanitarium for tuberculosis on a tract of land which has been deeded to the association for that purpose at Tomahawk, has sent out a pamphlet embodying a report of the work and objects of the association and appealing to the profession to interest themselves in the project. He desires correspondence with physicians and all others who are interested.

Division of Fees. The following amendment to the By-laws of the Chicago Medical Society will be brought up for consideration: "It is derogatory to professional character for physicians to pay or offer to pay commissions to any person whatsoever who may recommend to them patients requiring general or special treatment or surgical operations. It is equally derogatory to professional character for physicians to solicit or to receive such commissions."

Regulation of Proprietary Medicines. Senator Noble, who is a physician, has introduced a bill in the Wisconsin Senate which provides that no patent or proprietary medicine shall be sold in the state, unless there be attached to the label a correct formula of the ingredients, and such articles are to be subject to an analysis by the State Dairy and Food Commissioner. The fine for violation of the act is not to exceed $1,000.

"The Georgia Practician," a new monthly medical journal under the editorship of Dr. M. Cooley, of Savannah, Ga., has made its appearance. This periodical intends catering particularly to the needs of the physicians of the Southern States. The first number makes an excellent impression, and testifies to the high aims of its editor. We wish this new member of the medical family much success.

Board of Trustees for Milwaukee County Hospital.—At the instance of the Medical Society of Milwaukee County a bill has been prepared and presented to the legislature taking the management of the Milwaukee County Hospital out of the hands of the Board of Supervisors and placing it under a Board of Trustees to be appointed by the Judges of the Courts of Record of the County.

Increase in Mileage Fees.—At the request of the Dunn County Medical Society a bill was introduced in the legislature increasing the mileage fees of physicians called to examine persons charged with being insane. Under the present law physicians receive 10 cents a mile for this service, and the new bill increases this to 25 cents a mile.

The Fraudulent Christian Hospital, Chicago, was recently fined $250, and the charlatan Dr. Wood $100 and 70 days imprisonment, by Judge Holdom for fraudulently representing that Dr. J. B. Murphy and other reputable men were connected with and endorsed the quack institution. This ought to "holdom" for a while.

Dr. B. O. Reynolds, of Lake Geneva, an honorary member of the State Medical and Walworth County Medical Societies, who suffered from a light apoplectic seizure recently, is slowly recovering. Dr. Reynolds is 79 years of age and saw four years of service as surgeon during the Civil War.

Day Schools for the Blind.—A bill has been introduced by Senator Roehr in the Wisconsin Senate providing for the establishment of day schools for the blind in this state on the plan of the day schools for the deaf and dumb in successful operation in Milwaukee and elsewhere.

Dr. Joseph B. Whiting, Jr., of Janesville, died February 19, 1905. Dr. Whiting was a surgeon in the Wisconsin National Guard for many years, and major and surgeon of the First Wisconsin Volunteer Infantry. He was graduated from Rush Medical College in 1887.

Fire at the Milwaukee County Hospital recently destroyed $6,000 worth of property, subjected the patients to great peril and incidentally demonstrated that fire protection at the county institutions for the sick is wholly inadequate.

Presentation to Dr. U. O. B. Wingate.—The Milwaukee Medical Society, at a recent meeting, presented Dr. U. O. B. Wingate, who retired as treasurer after a long term of faithful service, with a chain and charm suitably inscribed.

Testimony in Criminal Malpractice. Senator Noble has introduced a bill in the Legislature compelling the giving of testimony in cases of criminal malpractice and preventing such testimony being used against the witness.

Dr. Arthur Cushny, Professor of Materia Medica and Therapeutics in the medical department of the University of Michigan, has resigned to take a similar chair in the University of London, England.

Riverside Sanitarium Changes.—Dr. F. C. Studley of Milwaukee, has incorporated the Riverside Sanitarium, increased the capital stock to $40,000 and will immediately proceed to the erection of a new building.

Medical Solons. Dr. Jas. H. Noble of Eau Claire, Senator, and Dr. Jas. Dinsdale of Soldier's Grove, Assemblyman, are the medical members of the Wisconsin Legislature now in session.

Dr. Alfred L. Buchan, of Racine, one of the best known physicians in southern Wisconsin, died Feb. 16, 1905, at Dover. He was graduated from Rush Medical College in 1871.

Dr. William S. Wheelwright, died at his home in Belleville, Wis., on February 5, 1905, aged 60 years. Dr. Wheelwright was a graduate of Rush Medical College, 1878.

Dr. Wingate Resigns.—Dr. U. O. B. Wingate, for many years member and until recently secretary of the State Board of Health, has tendered his resignation.

Peruna a Liquor. A Greensville, Ill. merchant was recently fined $20 for selling Peruna, containing 25 per cent. of alcohol, without a liquor license.

The Medical Society of the Missouri Valley will hold its semi-annual meeting in Kansas City, Thursday, March 23, 1905.

Dr. J. W. Lockhart, formerly of Delavan, has removed to Omro, Wis., to resume practice there.

Dr. L. F. Barker has been appointed Professor of Internal Medicine at the University of Chicago.

Dr. Dwight W. Rector, died at his home in East Troy, Wis., on February 20, 1905, aged 79 years.

IN MEMORIAM.

STORRS HALL, M. D.

BY WALTER KEMPSTER, M. D.

Dr. Storrs Hall died at the residence of his son, Dr. Sidney S. Hall, at Ripon, Wis., on Friday, January 13, 1905, at the ripe age of 91 years.

Dr. Hall had for many years been a notable figure among the pioneer physicians of Wisconsin, having the well deserved reputation of good scholarship, broad experience, and the wise use of talents. Above all he was an honest man.

There was interwoven into every fiber of his being a sturdy inflexibility of purpose which he inherited from a distinguished ancestry. He descended from John Hall, who settled in Charlestown, Mass., in 1630. Dr. Hall's father, Ira Hall, was a graduate of Dartmouth College, class of 1793, and subsequently became an eminent physician, in Granville, New York, where Storrs Hall was born, May 11, 1814, being the tenth and youngest son. His father, Ira Hall, died when Storrs Hall was but two years old. Dr. Hall's mother, Rebecca Parker Hall, was a descendant of Edward Parker, who settled in New Haven, Conn., in 1644; his grandmother and great-grandmother were members of the Storrs family, also early settlers in the Massachusetts Bay settlement.

With an ancestry possessing such sterling qualities, and influenced by the lofty ideals which controlled, and continue to control their descendants, Dr. Hall began his life work. He did not inherit a large share of this world's goods, but he did inherit a rare store of those characteristics which typified the men who built the country. These characteristics developed as he grew, and made him like one of them, God-fearing, upright, steadfast, a bulwark to the community.

Dr. Hall was frail in his early life, but he adhered rigidly to suggestions for the improvement of health. His father died of consumption and it was feared that the son would soon follow, but his strict regimen, the hygienic measures adopted, and his cheery disposition carried him through attacks of illness which might have proved disastrous, if not fatal, to one of less determination.

State Society dues are now payable to the Secretary of your County Society.

In spite of the illnesses which hindered him, he was graduated from Middlebury College in 1838, at the age of 24. It was his intention to enter the Christian ministry, and make that his life work, but failing health, and the belief of an early death, caused him to change his plans and he sought a milder climate, going first to Georgia, where he taught school for some time; while there he recuperated.

Returning to New York, he was appointed principal of East Bloomfield Academy, and afterwards conducted a private school for boys in Norwalk, Conn. The zeal manifested by Dr. Hall in everything he undertook soon carried him into the front rank, and he became well known as an earnest, enthusiastic worker in promoting higher and better education for the people. He established the first Teachers' Institutes in Connecticut, was the first president of the Fairfield County Teachers' Association, and was made vice-president of the first State Teachers' Association of Connecticut. This self-imposed hard labor and the rigors of the climate again undermined his frail organization and he was compelled to give up his work. Resting for a time, and thinking much about the malady which so frequently threatened to end his life, he determined to study medicine, hoping to aid himself as well as others. How perfectly he succeeded is demonstrated by the advanced age he reached—ninety-one years.

He attended medical lectures at Yale College and received a license to practice from the State Medical Society of Connecticut; the degree of M. D. was subsequently conferred by Middlebury College.

In September, 1840, Dr. Hall was married to a daughter of Joseph Scribner, of Norwalk, Conn., who survives him. Having heard about the healthfulness of the then "far West," he decided to remove there, and in 1851 came to Rosendale, Wisconsin, residing there continuously forty-eight years, when the failure of his wife's health caused him to remove to the home of his son, Dr. Sidney S. Hall, at Ripon.

When Dr. Hall came to the West he adopted a method of living which he believed would benefit him; he rode on horseback over long distances in the sparsely settled country, and spent most of his time out-of-doors; this, with the hygienic methods employed, restored his health and gave him vigor and strength that he had never known, agencies which his active mind employed in efforts to improve the well being of the community where he lived, and for which he worked.

Dr. Hall became at once a conspicuous figure, an ideal pioneer in the new community, and the people were quick to recognize his worth: Representing the best of New England life, and proud of his ancestry.

he sought to emulate their virtues, bringing to his new home the same zeal and intense devotion to public as well as private affairs that had made his ancestors such potent factors for good in the New World. He endeavored to aid all who sought his counsels in a quiet, unostentatious way, without self-seeking or aggrandizement, and with the incorruptible integrity which marked a race of men all too uncommon now.

His kindly ways won the confidence of the community, and his advice was sought on many subjects outside his professional career; he was soon a central figure in all movements made for the more perfect organization of society, morally, socially and politically. He was one of the first to arrange for building the Rosendale Congregational Church, in which he was a most devoted worker, never failing to give his influence and support to any cause which appealed to his sense of duty, continuing his membership to the day of his death. He was a trustee of Ripon College more than forty-four years, and secretary of the board of trustees for more than thirty-four years. When declining strength caused him to sever his official connection with that institution, he was at once made "Honorary Trustee of Ripon College." He was a charter member, and the first Master of Rosendale Lodge, No. 111, A. F. & A. M. He served his town in several civic capacities, always manifesting a keen interest in public affairs, toward which he displayed high-minded and scrupulous conscientiousness. As a physician his skill was recognized not only by the community where he lived, but his reputation extended throughout that part of the state adjacent to his home, and many a long horseback ride he took to consult with physicians living far from him.

He was a close observer and careful diagnostician; having determined the nature of the malady he used the best therapeutic means to bring relief. To the last days of his long and eventful life he kept himself well informed of the newer methods employed in diagnosis and treatment, his mental activity being more alert in acquiring knowledge of his profession than in any other direction, and this continued to the end. The comparative isolation of his earlier years in the West, gave him self-reliance and keen insight, which are often of vital importance in trying circumstances, and he possessed in great measure that broad sense which enabled him to exercise more than

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ordinary skill in determining what was best to be done in unexpected emergencies.

He was a member of the State Medical Society of Wisconsin, and the Fond du Lac County Medical Society; to both associations he gave his wise counsel in all matters pertaining to their welfare.

At one time an effort was made to raise the standard of qualifications for those who sought to enter upon the study of medicine; to promote this attempt he labored with characteristic zeal, believing that it was a duty to elevate the dignity of the profession, by requiring applicants to have at least a good common school education before beginning medical reading; he was, therefore, a pioneer in this, as in many other matters. He was greatly disappointed when the effort failed, but he lived to see the measure succeed. Although not in active practice the last four years of his life, he retained a vigorous interest in his profession and lamented the infirmities which prevented his work.

Active in so many ways, he was yet retiring and sensitive, avoiding the desire for applause, or the notoriety which has found so large a place in modern life. It was part of his religion to let the work declare the man.

Intelligent, public-spirited, zealous for the truth, broad and generous in his views, a firm believer in practical Christianity, Dr. Storrs Hall typified in his daily life those high qualities of mind and heart that make the perfect man.

His private home life we may not invade. To him home was a sacred place. Upon his family altar the fire of devoted affection for the bride of his youth burned brightly for more than sixty-four years. His last five years were spent almost constantly at his wife's side, endeavoring to relieve and comfort her, in her painful affliction.

Dr. Hall left four sons, Dr. Sidney Storrs, William Scribner, Charles Edwin and Ira Hall. To them he bequeathed as a precious legacy the example of an earnest Christian life, of devotion to duty, of untarnished honor, and of a full and perfect character.

To the medical profession he has left an example of those qualities which constitute the ideal physician.

CORRESPONDENCE.

Editor Wisconsin Medical Journal:

As the legislature is again in session, it would not be amiss to bring to the attention of the profession certain defects in the statutes relating to the practice of medicine in Wisconsin, as they now exist. It seems that since the organization of the Wisconsin Board of Medical Examiners in 1897, we have had medical legislation enough. This may be true in a sense, and yet it is a deplorable fact that certain irregularities are flagrantly occurring every day, to which the medical profession unconsciously lends its tacit approval, because of lack of medical laws or police power vested in the State Board of Medical Examiners to prohibit or regulate them. The law, as codified at the last legislature, is admirable, but it is only through years of experience in enforcing these laws, that defects are discovered.

The two most prominent or dominating features in the practice of medicine of to-day in Wisconsin, which need "regulation," are the practice of midwifery and the obnoxious practice of quacks and charlatans, made popular amongst the ignorant because of extensive newspaper advertising.

Although the practice of midwifery is a profession, which must of necessity be regulated on a liberal scale—that is to say, to allow certain persons, capable of performing the duties of an accoucheur, a proper sphere of usefulness, such persons, must, however, be restricted, when it comes to cases of abnormal presentations, or positions, or in conditions otherwise complicating labor. The use of instruments or the administration of chloroform or medicines of any kind in connection with this practice, should be absolutely restricted to the regularly licensed physicians. During the past few years, a great many complaints have been filed in this office against incompetent persons assuming the duties of a qualified accoucheur, because of their failure in the proper management of their cases, due principally to ignorance.

In reference to the advertising class of the medical profession, as an excuse for such state of affairs, it must be mentioned that many of these men were at one time ethical physicians in the community, and were as such duly licensed, and later switched over, or some of them have been licensed by the Board, although their status in the profession was well known. In such instances, which have not, however, occurred to my knowledge in the last two years, or since the law of 1901, the Board was helpless to exercise discretion, as these men had in every way complied with the provisions of the law, and licenses were issued to them upon advice of the legal counsel of the Board.

These are defects that the Board at the present time propose to have remedied, and to that end, assistance is sought for from the rank and file of the profession. The Biennial Report from the Secretary of the Wisconsin Board of Medical Examiners to the Governor, has been printed, and sent to the secretary of every county medical society of Wisconsin for distribution to its members, and I take liberty in quoting the paragraphs therein pertaining to that subject.

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"We are of the opinion that one or two additional provisions ought to be added to our medical laws. During the past, the board, and particularly the secretary of this board, has received a large number of complaints against incompetent persons who attempted to practice, and do practice, midwifery. For some reason or other, there is no law upon our books regulating the practice of this very important branch of surgery. The last legislature saw fit to determine the qualifications of persons who are known as barbers. It strikes us that legislation regulating the practice of midwifery is of much more importance, and that something in this direction ought to be done at once. Under the law as it now stands, of course, the board is powerless to do anything in these cases, where complaints are made, if the complaints are lodged against persons who do not claim to be physicians or surgeons.

"Our law likewise seems to be somewhat defective in cases of persons who, when they began the practice of medicine, surgery, or osteopathy, possessed the necessary qualifications, and secured the necessary legal endorsement for the practice of the profession, afterwards, by reason of unprofessional or dishonest conduct, by the practice of fraud or deceit, and even indulging in criminal practices, have forfeited the right of being considered honorable practitioners, in that it does not make any definite provision in such cases, and does not provide for the revocation of the license, but seems to allow persons, after once having received authority, to practice, to go on, no matter what their conduct or their character may be.

"The law of Michigan on this particular subject seems to be quite complete, and we take the liberty of quoting in substance this provision:

" 'The Michigan Board of Medical Examiners shall refuse to issue a license to any person guilty of grossly unprofessional and dishonest conduct of a character likely to deceive the public, and said board shall, after due notice and hearing, revoke a license issued subsequent to the passage of this act or subsequent to the date of the present existing medical laws of Michigan, for like cause or for offenses involving moral turpitude, habitual intemperance, the drug habit, or for fraud or perjury in connection with obtaining a license, or for a license obtained or issued through error, when such offenses shall have been legally established in a court of competent jurisdiction; and provided further, after the passage of this act, the board may, at its discretion, revoke a license, after due notice and hearing, of any registered or licensed practitioner who inserts any advertisement in any newspaper, pamphlet, circular, or other written or printed paper relative to venereal diseases or other matter of any obscene or offensive nature, derogatory to good morals.'

"This clause in the medical laws of Michigan has been endorsed by the local and the national medical societies.

"The necessity of a provision of this kind has been made apparent to this board repeatedly, and we recommend that the legislature enact a provision of this kind, in order further to prohibit imposters, and even criminals, from imposing upon our people, and bringing reproach upon the profession generally."

We ask the united support of the profession in our efforts in this direction, when this matter comes before the legislature, and no doubt further notice to that end will be received by the profession from the respective legislative committees.

FILIP A. FORSBECK, M. D.
Secretary State Board of Medical Examiners.

THE STATE MEDICAL SOCIETY OF WISCONSIN.

ORGANIZED 1841.

Officers for 1904-1905.

C. W. OVIATT, Oshkosh, President.

J. A. L. BRADFIELD, La Crosse, 1st Vice-President.

GILBERT E. SEAMAN, Milwaukee, 2nd Vice-President.

A. B. ROSENBERRY, Arbor Vitae, 3rd Vice-President.

CHAS. S. SHELDON, Madison, Secretary.

S. S. HALL, Ripon, Treasurer.

A. T. HOLBROOK, Milwaukee, Assistant Secretary.

Councilors.

FOR ONE YEAR.

1st Dist. H. B. Sears, - - Beaver Dam
2nd Dist., J. G. Meachem, - - Racine

FOR TWO YEARS.

3rd Dist., F. T. Nye, - - - Beloit
4th Dist., E. S. Hooper, - - Darlington

FOR THREE YEARS.

5th Dist., J. F. Pritchard, - - Manitowoc
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8th Dist., T. J. Redelings. - - Marinette

FOR FIVE YEARS.

9th Dist., D. L. Sauerhering, - Wausau
10th Dist., E. L. Boothby, - - Hammond

FOR SIX YEARS.

11th Dist., J. M. Dodd, - - Ashland
12th Dist., A. T. Holbrook, - - Milwaukee

Next Annual Session, La Crosse, June, 1905.

The Wisconsin Medical Journal, Official Organ.

COUNTY SOCIETY DUES ARE NOW PAYABLE.
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SOCIETY PROCEEDINGS.

WATCHMAN—WHAT OF THE NIGHT?

There is no member of the medical profession—worthy of the title—who, aside from his personal interests, does not have sincerely at heart the character and progress of the profession as a whole. A selfish and commercial spirit in any calling, or under any circumstances, is inconsistent with the best ideals or with true progress. To secure the best results in any undertaking it is necessary to work together and in harmony. This is not only a proper principle, but it is the best policy, since, in our efforts for the common good, we help ourselves, for we all rise or fall with the profession as a whole. As a science and as an art, the profession of medicine has made vast strides in these last years. We have learned to ward off disease and apply remedies when present with greater certainty and efficiency than

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our fathers. We have also made progress along the lines of medical education and legislation, but our steps have been halting and the way has been full of compromises and half-way measures. The causes of our failure have been evident from the first. It has been because of the lack of united action in our own ranks. Clique has opposed clique, and party has warred on party in place of all good and true men working for the common cause. The legislatures, the courts and the public have seen it all. They have reasoned that when the members of a great profession are not willing to manifest a proper respect for one another—as shown by fair treatment and harmonious action—it is not incumbent on them to do any better. Hence, the profession has not occupied the position to which it is fairly and justly entitled. Those outside the profession have virtually said, "When you have settled these differences among yourselves, and can show a united front in the advocacy of the things you wish, we will listen to you."

The plan which has been adopted by the American Medical Association, and under which we are now organizing the profession in Wisconsin, has for its chief end this very result. The word, and the work, is *organization,* without which no undertaking in the world can succeed, or accomplish its purposes. It asks every good man to stand by his fellow and be satisfied with the name simply of *physician,* without regard to school or party. Then if we have sense enough to choose wise leaders, we will follow their leadership and help to carry out their plans. The objects we seek to accomplish are absolutely identical so far as every member of every school is concerned. We wish to drive out quackery—preying much more on the public than on the medical profession. We wish to elevate the standards of medical education—both as to the requirements for entrance and for graduation in our medical colleges. We wish to obtain medical legislation which shall be uniform in all the states and which shall exclude the incompetent and the unworthy. We wish to protect worthy men in our ranks against the unjust attacks of mercenary ingrates, abetted by unscrupulous shysters. We wish, by this spirit of unity and co-operation, to elevate the ethical tone of the whole profession, so that helpfulness and protection shall take the place of opposition and hostility. The simple plan which has been adopted of making membership in a county society conditional to membership in the state and national societies, seems not only best suited for the purpose of effecting an organization of the whole profession, but it cannot fail to be, as well, of immense benefit in stimulating scientific progress and good fellowship. There is no limit to the benefits to be derived from

a live, well conducted county medical society if the membership appreciate the situation and make a proper use of their opportunities. We have 62 such societies in our state, with about 1300 members. It seems that we have made a good beginning, and now shall we permit this good work to languish, or fail to accomplish the good which proper effort on our part will secure? We should not rest satisfied till *every* good man, in *every* county, is gathered into the fold. That all are not with us already is due to various causes. In many cases it is because of ignorance of the issues involved, usually because the matter has not been properly and fully laid before them; apparently there is less hostility than indifference. To overcome this, nothing can take the place of *personal* effort. To reclaim the wanderers they must be seen and labored with personally. This means much painstaking and unselfish work on the part of many. The councilors and officers of the society can do much, but the whole membership must come to the rescue and do their part as well. The "Medical Society Spirit" must be a true missionary, self-sacrificing spirit, and if we can only attain to it we shall come to our meeting at La Crosse next June with a mighty host rallied under the banner of Organized Medicine.

C. S. S.

DODGE COUNTY MEDICAL SOCIETY.

The Dodge County Medical Society met in regular session at Beaver Dam, on Monday, February 6, 1905. Drs. J. W. Ehmer of Theresa, and J. A. Lyons of Neosha, were received as new members.

A very interesting program was presented. Dr. Otho Fiedler of Milwaukee read an excellent and instructive paper on *"The Application of Bacteriology to Public Sanitation and the Prevention of Disease."* The following members also read papers: Dr. Anna B. Corr, of Juneau, on *La Grippe;* Dr. Geo. W. Dewey of Minnesota Junction, on *Etiology of Endocarditis*; Dr. H. B. Sears of Beaver Dam, on *Organization and Ethics.*

The election of officers resulted as follows: President, E. M. McDonald; Vice-President, A. F. Schoen; Secretary, H. B. Sears; Treasurer, J. A. Clason; Delegate, H. B. Sears.

The society was entertained by the Physicians' Business Association of Beaver Dam.

H. B. Sears, M. D., *Secretary.*

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FOND DU LAC COUNTY MEDICAL SOCIETY.

The regular bi-monthly meeting of the Fond du Lac County Medical Society was held in Fond du Lac, Jan. 11. Owing to the severe snow storm that day but two of the doctors outside the city were able to get into town, and the snow kept the members of the society who were on the program from carrying out their part. The doctors in the city however, turned out to hear Dr. M. L. Harris, of Chicago, who read a paper on "Hernia."

Dr. Harris directed his remarks to *inguinal hernia*, and spoke of varieties and etiology. The treatment of hernia by injection methods he condemned. Palliative treatment in children by means of trusses and bandages used constantly and intelligently might prove curative. A hernia in a child which was not cured by these methods by the end of the fourth year was not apt to be cured. Then, operation would be advisable. Dr. Harris said that since Bassini had introduced his operation in 1884, the risk in operating on hernia had decreased till now the mortality given in surgical statistics is one-half of 1 per cent.

Dr. Harris said in his operations he used as sutures bronze aluminum wire No. 26 or 27, left the sutures in two weeks. His patients do not wear truss or bandage afterwards.

Dr. J. P. Connell of Fond du Lac, said that he was glad that Dr. Harris had mentioned the low mortality rate in operations on hernia. That in view of the small risk to be run from an operation no one should prescribe trusses for young men, the danger from strangulation being much greater.

F. A. Reed, M. D., *Secretary.*

MANITOWOC COUNTY MEDICAL SOCIETY.

At the regular meeting of the Manitowoc County Medical Society held at Hotel Williams, January 7th, the following officers were elected for the ensuing year: president, Dr. Louis Falge, Reedsville; vice-president, Dr. H. Thurtell, Manitowoc; secretary and treasurer, Dr. J. E. Meany, Manitowoc; censor, Dr. J. F. Mulholland, Manitowoc; delegate, Dr. J. F. Pritchard, Manitowoc; alternate, Dr. W. G. Kemper, Manitowoc. By motion it was decided to hold meetings on the first Tuesday in each month for the present.

The society relinquished jurisdiction over Drs. J. E. Westgate, F. P. Knauf and L. R. Pleyster, of Keil, Wis., to enable them to join the Calumet County Medical Society. The society now has a membership of 24.

J. E. Meany, M. D., *Secretary.*

MEDICAL SOCIETY OF MILWAUKEE COUNTY.

The Annual Meeting, at which 52 members were present, was held in the Trustee's Room, Public Museum Bldg., Dec. 9, 1904. The Secretary's report showed the present membership of the society to be 246. The Treasurer's report showed the society to be in good financial condition.

The report of the Tuberculosis Commission was read by Dr. U. O. B.

Wingate. He reported that the Commission had organized for work, had already districted the city and had endeavored to make a census of cases of tuberculosis within the different districts. Little has been accomplished as yet because of the difficulties encountered in securing reports of cases from physicians, but it was hoped much valuable data would be obtained.

The report of the Commission on Public Health and Legislation was read by Dr. G. P. Barth. The principal work of this committee during the year has been in co-operating with the Health Department in investigating legal qualifications of a number of illegal practitioners, in considering the advisability of introducing a bill into the Legislature providing for government by a Board of Trustees for the County Hospital, in considering amendments to the present state laws regarding the vital statistics, of codifying all the state laws and city ordinances relating to the practice of medicine in pamphlet form for the use of members of the society.

A motion was passed that a committee of five be appointed to appear before the Common Council in relation to the proposed change in location of the Isolation Hospital. This motion brought out a discussion which showed that the society was divided upon the advisability of retaining the Isolation Hospital on the present site or of removing it to another location, possibly beyond the city limits.

Election of officers for 1905 resulted as follows: President, Dr. J. W. Coon; Vice-President, Dr. R. C. Teschan; Treasurer, Dr. Joseph Kahn; Secretary, Dr. A. W. Gray; Censor, Dr. E. Copeland. Election of delegates to the State Society was deferred to the April meeting.

A. W. Gray, M. D., *Secretary.*

ROCK COUNTY MEDICAL SOCIETY.

The annual meeting of the Rock County Medical Society was held at Beloit, December 30, 1904.

The president, Dr. P. C. Helm, of Beloit, read a portion of Dr. McCormack's address at Madison, on "Organization," and also a letter from Dr. Sheldon of Madison, the secretary of the State Medical Society, on the same subject. This was followed by short talks on the subject by Drs. Helm, Buckeridge and Nye.

The next matter taken up was the election of officers for the coming year. The following were unanimously elected: president, Dr. S. B. Buckmaster, Janesville; vice-president, Dr. L. F. Bennett, Beloit; secretary and treasurer, Dr. G. W. Fifield, Janesville; censor for three years, Dr. W. F. McCabe, Beloit.

The meeting was then turned over to the leader, Dr. L. F. Bennett of Beloit. The first paper was by Dr. Fred Sutherland on "*The Etiology of Lobar Pneumonia*"; Dr. P. A. Fox then read a paper on "*The Diagnosis of Lobar Pneumonia*". Dr. Bennett then gave a concise and entertaining talk on "*The Treatment of Pneumonia,*" after which there was an animated discussion of

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the subject in which all the members took part. Following the program, refreshments were served, for which the members were indebted to Dr. E. F. Woods.

G. W. FIFIELD, M. D., *Secretary.*

TREMPEALEAU COUNTY MEDICAL SOCIETY.

The annual meeting of the Trempealeau County Medical Society was held in Dr. Hidershide's office at Arcadia, January 5, 1905.

President G. N. Hidershide gave a very interesting address on "*The Pioneer Physician of Trempealeau County.*"

The annual election of officers resulted as follows: president, Dr. G. N. Hidershide; vice-president, Dr. John Mathieson; secretary and treasurer, Dr. H. A. Jegi; censor, Dr. J. A. Palmer; alternate delegate, Dr. S. E. Hutchins.

The application of Dr. E. D. Pierce was added to our list.

H. A. JEGI, M. D., *Secretary.*

WALWORTH COUNTY MEDICAL SOCIETY.

The Walworth County Medical Society held its annual meeting in Elkhorn, on January 30, at 10 a. m. Election of officers resulted as follows: Edward Kinne, of Elkhorn, president; George H. Youngs, of Elkhorn, vice-president; M. V. Dewire, of Sharon, secretary-treasurer; Ernestine J. H. Garl, of Lake Geneva, censor for three years; J. C. Reynolds, of Lake Geneva, delegate to the State Society for 1905. Dr. C. C. Blanchard, of Delavan, was elected a member of the society.

Dr. O. S. Canright, of East Troy, read an excellent paper on "*Common Sense in the Practice of Medicine,*" for which he received a vote of thanks from the society.

Drs. B. O. Reynolds, of Lake Geneva; D. W. Rector, of East Troy; D. G. Morris, of Sharon, and A. J. Rodman, J. B. Henningway and D. B. Devendorf, of Delavan, all physicians over 75 years of age, were made honorary members of the society.

After further business discussion the society adjourned to the Elkhorn House, where a suitable banquet had been prepared at the order of President Kinne and which added a nice feature to the meeting. The society adjourned to meet on call of the president and secretary some time during the summer.

M. V. DEWIRE, M. D., *Secretary.*

WASHINGTON COUNTY MEDICAL SOCIETY.

The regular quarterly meeting of the Washington County Medical Society was held at West Bend, December 28, 1904. The following program was presented:

The President's address, "*Medical Aspects of the Present System of Edu-*

cation," Dr. Blank, Milwaukee. *"Office Hours for the Practitioner in Medicine,"* Dr. G. A. Heidner.

The following officers were elected for the ensuing year: president, Dr. D. W. Lynch; vice-president, Dr. G. A. Heidner; secretary and treasurer, Dr. W. J. Wehle, West Bend; censor, Dr. N. E. Hausman; alternate delegate, Dr. W. J. Wehle.

The following applications for membership were received: Dr. O. E. Werner, West Bend; Dr. Ernest Butzke, Jackson. Upon recommendation of the censor, they were admitted.

The next meeting of the Society will be held in Schlesingerville on the last Wednesday in March, 1905.

W. J. WEHLE, M. D., *Secretary.*

ELEVENTH DISTRICT MEDICAL SOCIETY.

The annual meeting of the Eleventh District Medical Society was held at Superior on January 10th and 11th. At the meeting of January 10th, the election of officers for the ensuing year resulted in the choice of Dr. William E. Ground of Superior, as president, and Dr. D. H. Lando of Hurley, secretary and treasurer.

The constitution which had been considered at the last meeting was approved at this time.

A resolution was adopted authorizing the president and secretary to consult the members of the assembly from the districts included in the jurisdiction of this society and endeavor to secure the passage of laws regulating the practice of midwifery and place some restraint upon the soliciting of patients by advertising in newspapers and by hand bills.

After the business session the following scientific program was presented: "Symptomatology and Treatment of Retroversion," Dr. C. H. Stewart, Duluth; "Ectopic Gestation," Dr. W. E. Ground, Superior; "Medical Inspection of Public Schools." Dr. C. D. Conkey, Superior; Paper, Dr. J. H. Urquhart, Iron Belt; "Fee Bill and General Practice," Dr. J. P. Cox, Spooner; "Peritonitis," Dr. J. M. Dodd, Ashland; "Treatment of Acute Suppurative Appendictis," Dr. W. T. Rinehart, Ashland.

The evening of the 10th was spent by a visit to the Metropolitan Opera House at Duluth.

On January 11th the members of the society witnessed a very interesting surgical clinic at St. Mary's Hospital, Superior, at which several instructive operations were performed.

A vote of thanks was extended to Dr. C. H. Stewart of Duluth for his very able paper, and also to the Douglas County Medical Society for the entertainment extended.

The next meeting of the society will be held at Washburn, September 12th and 13th.

D. H. LANDO, M. D., *Secretary.*

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JOHNS HOPKINS MEDICAL SOCIETY.

The medical treatment of gastric ulcer, was discussed by Dr. McCrae as part of a symposium on this subject. He said in substance that in the diagnosis of gastric ulcer, the three important points are: (1) the presence of blood in the stool, special stress to be laid on the microscopic examination for blood in the stool; (2) pain; (3) vomiting. Hyperchlorhydria is not a constant feature. The differential diagnosis from gastric neurosis may be left open as the treatment is practically the same. The pain is not so constant, and repeated gastric analysis will clear the matter up. In gall stone colic the onset is rapid and soon passes away. The gastric crises of tabes are also to be taken into consideration, and other symptoms are to be looked for. As to the possibility of neoplasm in an old ulcer, if its presence is not determined by gastric analysis in 10 days, surgical exploration is indicated.

The treatment of acute cases of gastric ulcer, is, like any superficial ulcer, first and foremost by rest. Complete stoppage of food per os for 4 to 6 days, and patient to be fed per rectum. Water may be given by mouth. Food calls forth the gastric juice which irritates the ulcer. After four days liquid nourishment may be begun per os giving small amounts of peptonized milk or whey. This is kept up for from 10 to 14 days. The average amount to give is about 1 quart per diem, well diluted with sodium bicarbonate solution. After two weeks may begin with gruels, beef juice and custards. After four weeks begin with soft diet. Conservatism is the important point; with the slightest sign of irritation go back to the milk diet.

The gastric secretion can be stopped by 1-200 to 1-150 grain of atropin, and neutralized by large doses of sodium and magnesium carbonate. Bismuth one drachm, 4 to 6 times per diem, olive oil, one-half drachm, 3 or 4 times per diem, and silver nitrate given in capsules are often of great service.

The stomach is to be washed out when indicated; the tube is not required. The treatment must not stop when the patient is well, but must be followed for at least a year, and the patient kept on alkalies.

In the chronic cases the treatment is much the same, only it must be kept up for much longer periods of time. If the case shows no signs of improvement, surgical means are to be resorted to, especially when there is a suspicion of malignant growth or hemorrhage. Of importance also is it to turn the patient over to the surgeon before the anemia is too far advanced to make an operation dangerous.

In case of perforation turn the case over to the surgeon at the earliest moment. Prepare in advance for emergency. Warn the nurse to notify you in case of sudden abdominal pain. Diagnosis should be made in two or three hours after perforation.

For hemorrhage, when not severe, the best treatment is absolute rest, cutting off all food and morphia. In recurring and severe hemorrhage surgical procedure is justified, and in the recurring variety especially, the medical man should not wait too long for fear of a fatal hemorrhage.—(Henry F. Helmholz.)

BOOK REVIEWS.

Serums, Vaccines and Toxines in Treatment and Diagnosis.—By Wm. Cecil Bosanquet, M. A., M. D. Oxon., F. R. C. P. Lond. Chicago: W. T. Keener & Co. $2.00 Net.)

So vast is the literature upon the question of immunity, serums, toxins, etc., that any volume making cosmos out of chaos by setting forth in succinct form facts sufficient to give the reader an insight into matters that may otherwise seem obscure and complicated, is to be highly commended. Such is the volume before us. The first chapter is devoted to "Historical Retrospect"; the second deals with the question of immunity, elucidates the Ehrlich Side-Chain theory and explains the reaction of hemolysis, agglutination, precipitins, cytolysis, etc. The preparation and administration of serums and vaccines is next considered, and a brief chapter is devoted to the agglutination test. Then follow chapters devoted to a thorough consideration of the preparation and uses of serums and toxines of diphtheria, tetanus, snake-bite, smallpox and vaccinia, hydrophobia, plague, enteric fever, cholera, streptococcal affections, tuberculosis and malignant tumors.

Much credit is due the author for the very satisfactory manner in which he has handled a subject that is still in its infancy. This book will doubtless familiarize many with a subject of which they cannot hitherto have had more than a vague conception. The bibliography is very extensive.—(A. J. P.)

International Clinics—A Quarterly of Illustrated Lectures. Edited by A. O. J. Kelly, A. M., M. D. (The J. B. Lippincott Co., Philadelphia.) Vol. III., Fourteenth Series.

The first 123 pages of this volume are devoted to a symposium on Syphilis, there being twelve separate articles devoted to this disease. Campbell Williams of London, Ohmann-Dumesnil of St. Louis, G. Carrière of Lille, G. Milian of Paris, Wm. G. Spiller of Philadelphia, A. Chauffard and Gouraud of Paris, J. W. Ballantyne of Edinburgh, A. Fournier of Paris, Thos. R. Neilson of Philadelphia and Wm. S. Gottheil of New York City, are the contributors to this symposium, and a mere statement of the fact is sufficient guarantee as to the character of the text.

Following this symposium is a series of articles on Treatment, all of which are valuable and timely. They are as follows: The Treatment of the Digestive Disturbances Occurring in Pulmonary Tuberculosis, by Lawrason Brown, of the Adirondack Cottage Sanitarium, Saranac Lake; Rest Cure in the Treatment of Chronic Constipation, by Boas of Berlin; The Treatment of Diabetes Mellitus, by T. Stuart Hart of New York.

The next forty-five pages are devoted to Medicine, the contributors being Allchin of London, Wm. H. Katzenbach of New York, Louis F. Bishop of New York, and Andrew Duncan of London. These articles are all on practical subjects of every-day interest, are well written, and represent up-to-date knowledge of the subjects treated.

There are four lectures on Surgical Subjects, as follows: Umbilical Hernia in the Female, with the report of Three Cases of the Strangulated Variety Occurring in Women, two of whom weighed over 300 pounds each, by Thomas H. Manley of New York; Foreign Bodies in the Bronchi, by Drs.

Lermoyez and Guisez of Paris; The Technic, Diagnosis, Significance, and Therapeutic Application of Lumbar Puncture, by Purves Stewart of London; and The Pathology and Operative Treatment of Acute Osteomyelitis and Osteosarcoma, by Charles Greene Cumston of Boston.

Then follow three lectures on Gynecologic subjects and one in the department of Neurology—Paralysis Agitans—by F. W. Langdon of Cincinnati.

The articles in this volume are all of unusual calibre, are considerably above mediocrity, and the book will serve to enhance the reputation already achieved by "International Clinics." (W. H. W.)

Transactions of the American Roentgen Ray Society. (Murdoch-Kerr Press, Pittsburgh, Pa., 1904.)

These transactions contain eighteen articles by representative men on subjects covering many features of X-ray work, a few of which seem especially worthy of mention. The article by Newcomet on the Changes in Tissue under the Influence of X-ray, and the discussion which followed, will be found interesting. Leonard contributes a paper on the Diagnosis of Renal Calculus by means of the X-ray. He believes this method to be of the greatest diagnostic value when carried out with the proper amount of skill, and also most valuable as a means of accurately determining the number and location of calculi in the kidney or ureter. The Location of Foreign Bodies is discussed by Sivert and will well repay reading. Pancoast reports the results of treatment in nearly 100 cases. This is one of the most important papers of the series. Failures as well as successes are frankly discussed. The different phases of the treatment of lupus, keloids, and especially malignant growths, are fully considered both in the paper and in the discussion. The article by Wilbert calls attention, among other things, to the far greater value of the skiagraph as compared with the fluoroscope in determining the presence of a fracture, and also to the great value of this method in determining the presence of small and obscure fractures. Pitkin's presentation of the dangers to the X-ray operator is thorough, and the discussion of preventive measures is important. (J. D. M.)

Immune Sera, by Prof. A. Wassermann, M. D. Translated by Chas. Bolduan, M. D. (John Wiley & Sons, New York. $1.50.)

This little volume from the pen of one so eminently qualified to discuss a subject of such great interest and importance to the student of medicine, will be hailed with delight by many practitioners.

Wassermann's discussion of the immune sera is brief, simple and withal quite complete. He omits generally the controversies which have arisen between workers in this field, and much of the detail of experimental work, and many experiments altogether, content with enumeration and brief explanation of those from which the essentially important and generally accepted facts have been deduced.

The first chapter comprises the major portion of the work, and is devoted to the hemolysins. Ehrlich's theory is propounded, explained and analyzed, and the experimental work in substantiation of it, and that of Bordet, more or less opposed or antagonistic, briefly outlined. Herein is considered the subject of immunity including formation, chemical nature, composition and

action of toxine, toxoid and anti-toxine. Of the latter is given the experimental method of its production and the theoretical explanation of its action. The author explains the chemical nature of the cell molecule affected, its side chain or receptor, and the reaction between this and the poisonous chemical bodies entering the system.

The agglutinins are next considered and an attempt is made to show the manner of formation of these chemical constituents of the blood serum. It is by virtue of the presence of these compounds in the blood and their reaction with certain constituents of the bacterial cell that agglutination of such cells takes place, as is seen in Widal's reaction and other like processes.

A short second chapter is devoted to the cytolysins. Herein are given a few experiments which demonstrate the production in the blood serum of certain specific compounds which act as solvents of that particular kind of cell which has been injected into the circulation of the animal.

The third chapter treats of the specific precipitins. These compounds, constituents of the blood serum, are produced therein by injection of soluble proteids into the circulation of an animal. Specific precipitins are thus developed for the proteids of milk, urine or any other body juice of a given specie. The practical application and importance of all this is quite evident; in medico-legal cases it may be employed to give the most important information.

The book is one every physician should read and study, not that he will find therein much that will be of practical value to him in his every day work, but because he will derive therefrom new views of the chemistry of the blood serum. He will learn of heretofore unheard of properties of this fluid by virtue of which the body successfully disposes of many poisons and various disease germs which find their way into the circulation of the animal.

Moreover, it is, we believe, by work along this line that we shall ultimately discover the exact method of action of the drugs we administer, in other words, reach a rational therapy, when we shall administer the medicament with exact knowledge of what it will do and how, rather than empirically as now, and on the authority of its results in other previous cases.

(O. F.)

Die Wirkungen von Arzneimitteln und Giften auf das Auge.—Handbuch für die gesammte ärztliche Praxis. (The action of Drugs and Poisons on the eye.) By Prof. L. Lewin, Berlin, and Dr. H. Guillery, Oberstabsarzt, Coeln., Vol. 1, 857 pp., with 85 figures in the text. Berlin, 1905. August Hirschwald. M. 22. $5.50.

The authors present in a most exhaustive and critical manner, the actions of substances which cause changes in the eye, from clinical material of all times and countries, laid down in literature, and from experiments of their own. After a general introduction on disposition to disease, reception, distribution and excretion of chemical exogenous matter in the different parts of the eye, the subject matter is divided into 3 sections: (1) Substances paralyzing the nervous system; (2) those exciting the nervous system; (3) substances which, chemically or physically, influence the metabolism of the living albumen. In the first section are considered: The inhalation nar-

cotics, as chloroform, carbon-bisulfide, etc., with numerous casuistics and charts of the visual field. Then follow the hypnotics, and local anesthetics. The authors found, in all their experiments, except one, that pure cocain had no deleterious effect on the epithelium of the cornea, while this occurred when the various salts of cocain were used.

Atropin glaucoma and atropin conjunctivitis are minutely discussed. The authors see in the latter nothing but a drug exanthem, and, in support of their view, mention analogous affections of mucous membranes, brought about by atropin and various preparations of belladonna. It has nothing whatever to do with the presence of micro-organisms in atropin solutions.

The action of ethyl-alcohol on the eye is masterfully portrayed in 115 pages, methyl alcohol in 13 pages. The intoxication by tobacco is also very exhaustively dealt with, followed by chapters on coffee, tea ,etc., and the spasmodics.

In the last section the metalloids, metals and acids are considered. The authors emphasize that the disappearance of morbid symptoms by the use of mercury is never sufficient to prove their syphilitic nature. Mercury, taken for a longer period, materially influences the metabolism of albumen, and may effect a cure of non-syphilitic affections. The important affections arising from the effects of iodide of mercury *in statu nascendi*, which is the essential factor, on inspersion of calomel into the eye, in persons who use iodin preparations internally, are set down in a special chapter. Over 100 pages are allotted to the intoxication with lead. Pages 637 to 686 are devoted to the action of metabolic poisons, the toxins of meat, sausage, fish, mollusks, blood, etc., then pellagra, hay-fever, thyreoidin. The next chapters are on poisons, producing opacities of the lens, as naphthalin, etc., on blood poisons: Carbonic oxid, anilin, chlorate of potash, etc., and animal poisons, as the hairs of caterpillars, the stings of bees and wasps, ants, spiders, scorpions, cantharides, etc., substances poisoning the eye after entering the circulation: hemosporidia malaria, aphidina, nematodes, cestodes, serpents, epizoa and entozoa of the eye.

This partial enumeration of subjects will show what an immense material is here collected. The authors have faithfully adhered to the task, set out in the preface, and have accomplished it admirably. It is a most conscientious work, the result of many years of study and original research. The book is not simply a dry collection of facts, but it is written in a most pleasing and fascinating style, so that whichever chapter one looks up, one feels anxious to read it through. It is exceedingly practical, since it not only gives the symptomatology of intoxications of the eye and other organs from experimental and clinical observations and pathological anatomy, but also the treatment. The second volume is in press, and will contain the poisons from pathogenic germs and the local inflammatory and caustic poisons. A general table of contents is included, and special synopses precede the single groups and substances. (C. Z.)

New Methods of Treatment. By Dr. Laumonier. Translated from the second revised French edition of H. W. Syers, M. A., M. D., Cantab. (W. T. Keener & Co., Chicago, 1904.) $2.50 net.

This volume is a translation of the second French edition, and the fact that the first publication is but one year old, testifies to the success attained by the original. It is obvious that the general practitioner has little time to acquaint himself with the many new departures in therapeutics as detailed in current literature, and that he must necessarily content himself in large part with continuing to employ those drugs and remedies that have stood him in good stead in times past. However, as the older theories of the causation of disease are being undermined, a more rational therapeutics is being evolved. and methods are employed that differ widely from those of earlier days.

In his preface the author says: "In writing this book I have endeavored to furnish medical men, and those who are interested in the subject of therapeutics, with definite and complete, and at the same time short and clear, information concerning the new drugs and methods of treatment whose worth has been established and which are sufficiently well known to be described in a definite and practical manner. Thus, I have not noticed methods which are well recognized or classical, or those which are known to be imperfect or which have been too recently introduced to have given sufficiently convincing proofs of their value."

In Chapter I., the author treats, among other things, of the therapeutic uses of albumins, lecithins, nucleins, glycero-phosphates, cacodylates and yeasts. A second chapter is devoted to Blood Alterants (defibrinated blood, substitutes for iron. etc.); Chapter III. to Mineral Medication, including the use and formulæ of various artificial mineral serums. Succeeding chapters deal with Respiratory Alterants (derivatives of turpentine, eucalyptol, creosote. etc.); Renal Alterants (spermine, piperazine, strontium salts, etc.); Vasomotor Alterants; Opotherapy (all glandular extracts); Serotherapy and Vaccination; Nerve Alterants, (dionin, heroin, eucain, nirvanin, orthoform); The Antipyretics; The Antiseptics (derivatives of silver, mercury, iodin and formol).

This rough sketch of chapter headings gives an idea of the scope and character of the book. While many of the new drugs whose action is described and whose therapeutic indications are outlined, have not yet been widely employed, still we are greeted with impartial statements of experimental and therapeutic facts. and the ring of genuineness is everywhere apparent. Because of the excellent character of the matter therein contained, and the additional fact that this is the only single volume in which these newer remedies are succinctly treated, we believe that Dr. Laumonier's book will be found a useful supplement to our own text-books, and will meet with well merited success. It will certainly be in demand by all physicians who endeavor to keep abreast of the newer therapeutics.

The diction is very good and has not the stilted form of many translations. (A. J. P.)

Manual of Serum Diagnosis. By Dr. O. Rostoski, University of Wurzburg. Translation by Dr. Charles Bolduan. ($1.00.) John Wiley & Sons, New York City.

This little volume of 86 pages contains in compact form an excellent resumé of this subject. An introductory chapter treats in general of the meaning of such terms as immunity, toxins, antibodies, antitoxins, agglutinins, bacteriolysins, cytolysins, precipitins, etc. The second chapter deals with the Gruber-Widal and paratyphoid reactions. Attention is here called to the fact often lost sight of, that a patient suffering from an acute infections disease may show a Gruber-Widal reaction which may be due to a previous typhoid, and that therefore the reaction is especially conclusive, when, after being negative in the beginning of the disease, it becomes positive sometime after.

In the chapter on tuberculosis are quoted the results of German experimenters who find the percentage of positive reactions of tubercular serum the same in tubercular as in non-tubercular cattle, though others, and particularly the French, claim for their Arloing-Courmont reaction only one failure in 120 animals, while the Koch reaction showed an error of two per cent.

Succeeding chapters treat of agglutination in other diseases, such as bubonic plague, cholera, dysentery, and pneumo-, meningo-, staphylo-, and streptococcus infections. Another chapter deals briefly with precipitins and their application in the identification of blood.

This volume is to be commended as containing a very satisfactory resumé of the work that has been done upon the subject of serum diagnosis.

(A. J. P.)

The Surgery of the Diseases of the Appendix Vermiformis and Their Complications. By William Henry Battle, F. R. C. S., and Edred M. Corner, M. B., B. C., F. R. C. S. Price, $2.50 net. Chicago. W. T. Keener & Co. 1905.

This monograph of 207 pages is one of a number of works of its kind which has appeared during the last three or four years. This work gives a rather complete review of the literature up to date, and the authors are to be complimented on their extensive research into the rarer complications and anomalies to be met with in diseases of the appendix. On the other hand, we are unable to find anything new in this work. In many places the language is so obscure and involved that it is difficult to be certain of the real meaning. We can not refrain from criticizing the use of such terms as "acute abdomen," "acute belly," and "peritonism," which, to say the least, convey no meaning that can not be better expressed in other terms. On the whole this work is disappointing to the experienced surgeon, for from it he can learn nothing of practical value. The beginner in the field of surgery will find difficulty in following the thought of the authors owing to lack of clearness and obscurity of the language used. (H. A. S.)

CURRENT LITERATURE.

The Clinical Significance of "Occult" Blood in the Stools.—J. D. Steele (*Progressive Med.*, Dec. 1, 1904; reviewing articles by Boas in Deut. Med. Wochenschr., 1903, No. 47; Hartmann, Archiv. f. Verdauungskr., 1904, Bd. x, No. 1; Joachim, Berl. Klin-Wochenschr., May 2, 1904; Schmilinsky, Münch. Med. Wochenschr., 1903, No. 49; Schloss, Arch. f. Verdauungskr, June 30, 1904, Bd. 10, H. 3.), says that by the term "occult blood" is meant blood present in such minute quantity, or so decomposed, that it cannot be readily recognized even with the microscope. For its detection Boas has elaborated the old guaiac and ozone test. His conclusions, fully confirmed by the other observers above named and also by the reviewer, and based upon the very uniform results in a large number of examinations, are:

1. Blood is found *constantly* in *cancer* of the gastro-intestinal tract.
2. It is present *intermittently* in *ulcer;* it *disappears on the adoption of a purely milk diet* and does not return during the continuance of such diet.
3. It is *occasionally* found in *organic* and *spastic pylorie stenosis.*
4. It is not found in acid, anacid, and subacid gastritis, hyperacidity, hypersecretion and neuroses.

(If the correctness of these propositions can be fully confirmed, we shall at last have a reliable and readily available means of differentiating between malignant disease, ulcer and other affections of the gastro-intestinal tract. The test is simple and can be carried out by anyone at all familiar with chemical technique. Whatever possibilities of error may yet be discovered in the method, it deserves, in the light of its results to the present time, to be taken up and thoroughly tried by our hospitals and all who are interested in gastro-intestinal diseases.—H. R.)

Technique: All meats, including fish, are avoided for several days before the tests are begun, and the stools made soft by some mild laxative. Two or three grams of stool is mixed with 20 cc. of water and extracted with 20 cc. of ether to remove the fats. This mixture is extracted with one-third its volume of acetic acid and thoroughly shaken. Ten cc. of ether is then added and the mixture again shaken. If then the ether does not rise to the top in a short time, the process can be hastened by adding a few drops of absolute alcohol. To two cc. of the ethereal extract is then added 10 drops of freshly made tinct. guaiac (resin of guaiac 1, absolute alcohol 25), with 10 to 12 drops of old ozonized oil of turpentine, the latter added drop by drop. All utensils must be perfectly dry. If blood is present an intense blue color will appear in a few minutes, changing gradually to a reddish violet tint.

A green or greenish-blue color does not indicate blood. Contact with the skin of the hand must be avoided, as the fatty acids of the skin would simulate the blood reaction. Pure oil of turpentine, ozonized by exposure to the air for eight weeks, should be used. Pure solution of peroxide of hydrogen may be substituted for the turpentine, the same proportions being used.

As a control reaction Boas recommends Klunge's aloin test. Shake up as much aloin as will rest on the tip of an ordinary laboratory spatula with 5 cc., of absolute alcohol. Mix 5 cc. of acetic acid and ethereal extract, prepared as above described, with 20 to 30 drops of ozonized turpentine and then with 10 to 15 drops of aloin solution. If blood is present a bright-red color

appears which turns cherry red on standing. Boas considers this aloin test the better one, as it is not influenced by the presence of fats or fatty acids. The addition of a few drops of chloroform will hasten the color changes.—(H. Reineking.)

An Analysis of Twenty-five Cases of Strangulated Hernia Treated by Operation.—G. T. Vaughn (*Med. News*, Dec. 24, 1904), gives his experience in the treatment of strangulated hernia by operation. Twenty-five cases were treated. Five were femoral and twenty oblique inguinal. Care was taken to exclude all cases of simple incarceration, and only those cases in which the intestine was so constricted as to obstruct the circulation of the blood and seriously threaten, and in several cases to destroy the integrity of the intestine. There were six deaths. In all except two of the fatal cases the strangulation had existed for from three to thirteen days. One was an alcoholic, and one with a strangulation lasting but eight hours; taxis had been employed and the sack contained three feet of ileum almost black. There were numerous large thrombi in the mesentery.

Dr. Vaughn believes that all except the alcoholic would have lived had a timely operation been performed. He never advises taxis believing that the danger is much greater than an operation. Except where drainage is required an operation for radical cure is done.—(F. E. W.)

The Dangerous Characteristics of the Insane are discussed by Hoche (*Medizinische Klinik*, Vol. 1, No. 2). He points out the value of a knowledge of psychiatry to the family physician in assisting him in recognizing conditions that may prove a serious menace to the patient or his surroundings.

Dangerous insane are classified into those who are dangerous to others and those who are dangerous to themselves. He combats the popular fallacy that attributes dangerous characteristics to insane in proportion to the degree of disturbance created by them, and shows that as a matter of fact the quiet, depressed and fearful patient may often be the more dangerous. Of the different forms of mental disturbances, he looks upon those having epilepsy or alcoholism as a basis, as being the most liable to develop dangerous tendencies, and this irrespective of the variety that the clinical picture of the latter may represent.

Cases of chronic paranoia are more dangerous during the first half of the course of the disease if accompanied with hallucinations. Patients suffering from the hypochondriacal form of chronic paranoia are particularly liable to prove dangerous to physicians as statistics show. The excitement accompanying mania is comparatively harmless in character and attacks from patients suffering therefrom are rare in institutions for the insane where mechanical restraint is not employed. Dangerous tendencies are also found quite frequently in cases of so-called impulsive insanity, hysteria and feeble-mindedness. Cases of mental disease with suicidal tendencies are always to be regarded as being also dangerous to others, a fact which is not generally appreciated to a sufficient extent. The author has gathered statistics in relation to this point, and has thus arrived at a measure of the frequency with which suicide combined with homicide occurs. Other statistics have developed the interesting fact, that during the period covered, no wife has killed her husband, while seventeen husbands have killed their wives. The tendency to

destroy the lives of the children in addition to the suicide is from 3 to 4 times as great in the wife as in the husband. Patients suffering from melancholia or alcoholism develop suicidal tendencies most frequently.—(Wm. F. Wegge.)

Therapy of Joint Tuberculosis.—After an historic review of the non-operative treatment of joint tuberculosis, Mosetig-Moorhof (*Wien. klin. Wochensch.*, Dec. 8th, 1904) divides the final results obtained in four classes, each of which he discusses.

1st. Those in which complete cure has resulted without much deformity or limitation of function. 2nd. Those in which cure of the fungous articuli osseus was followed by considerable deformity or disturbance of function: contractures, luxations or subluxations, excessive bone growth, scars. 3rd. Cases with rapid progression of the disease and destruction of the joint with or without suppuration. 4th. Lethal cases due to general tuberculosis or extensive amyloid change attendant on prolonged suppuration. In cases considered cured the symptoms disappeared owing to (a) cicatrization of the lesions, or (b) to the encapsulation of the bone foci by sclerotic tissue. This latter he considers the result in the majority of cases.

Arguing from this, M. states that the rational conservative treatment is operative especially in cases of fungus osseus.

The tissues must be as thoroughly removed as though dealing with a malignant growth. The tuberculous foci in the bones are removed with chisel and hammer, the mere gouging out with a spoon being insufficient. In no case, however, in which the full growth of the skeleton has not been reached should the epiphyseal zone be destroyed. Finally all tissue defects produced by the operation are carefully replaced by means of iodoform plugs, *i. e.*, cavities produced by the removal of bone, etc.

The first bandage should be light and easily removable; consequently M. never uses plaster of Paris, but a starch bandage re-enforced by wood shavings.

From November 1, 1899, to November 1, 1904, 537 cases were treated. Of these 29 belonged to class 4—the "absolutely too late" class. Mutilating operations were done 137 times on cases in group three—relatively too late. 371 cases were treated by resection with iodoform plugging, 67 under 10 years of age. All are cured and were dismissed in a comparatively short time with functionable extremities.

In conclusion: Granting the infectiousness of tubercular foci, the only rational treatment is the thorough operative removal of tubercular tissue in joints.—(Geo. P. Barth.)

The Relation of Tertiary Syphilis to Tabes Dorsalis and Progressive Paralysis.—Guszman and Hudovering (*Monatsh. f. prakt. Dermatol.*, No. 1. 1905), approach this problem from a new direction. They examined the condition of the nervous system in regard to the existence of tabes, progressive paralysis or tabo-paralysis, of 50 patients (24 men and 26 women) applying to the dermatological clinic for treatment of tertiary syphilitic lesions (affecting the skin in 41, oral or nasal cavities in 8, and muscles in 1). In all these cases the initial infection had occurred at least three years before, the average being 6 to 10 years. In 11 women the time of infection could not be definitely established. Of the 50 patients, 23 (of whom 65.6 per cent. were

women) had never been treated for syphilis, and only six had received a thorough course of treatment. The neurologic-psychiatric examination, conducted at the neurologic clinic, showed the nervous system normal in 44 per cent., combined systemic disease (?) 2 per cent., suspicious cases 8 per cent., tabes dorsalis 24 per cent., progressive paralysis 14 per cent., tabo-paralysis 8 per cent.—*i. e.*, 46 per cent. in the class of cases under discussion. Statistics as to the influence exerted by hereditary predisposition to diseases of the nervous system or psychoses, including apoplexy, alcoholism, etc., in these tertiary syphilitics, show that heredity plays a great part in determining the later development of tabes and paresis, especially in men. The time that elapsed between infection and the beginning of the nervous disease, was determined with accuracy in almost all cases, being between 1 year and 27 years, with an average of 7½ years. In the greatest number of cases lancinating pains in the legs were the first symptoms, followed soon after by bladder disturbances, generally incontinence. Marked pupillary disturbances were not present in most cases, reaction to light being generally varying degrees of a sluggish reaction. The question of syphilis as the sole cause of tabes or paresis is not solved by this research, but it is established that in the larger number of these cases syphilis was the cause. O. H. F.

Clinical Observations on Diphtheritic Paralysis.—J. D. Rolleston (*Practitioner*, Nov. and Dec., 1904), thinks that the variations in the estimation of the relative frequency of paralysis following diphtheria depend on the facts that formerly many mild cases of diphtheria were not recognized; that in pre-antitoxine days many patients died before paralysis had time to appear; and that many slight cases were overlooked. In 50851 cases reported by the Metropolitan Asylums Board during the years 1895-1902, inc., paralysis was observed in 9936, or 19.5 per cent.

The relation of diphtheritic paralysis to the character of the initial attack has been a much disputed question. R's statistics, covering 500 cases coming under his own observation, show a very distinct relationship; the very severe cases giving 82 per cent. of paralyses of all kinds and 58.9 per cent. of severe paralysis cases, while the mild cases showed paralyses in only 3.4 per cent. and no cases of severe paralysis. At the same time it is undoubtedly true that severe and even fatal paralysis may follow a mild attack of diphtheria, especially when the patient returns too soon to hard work. Keeping the patient recumbent is often enough to ward off paralysis completely in the milder forms, and to render it less extensive in the severer.

In the great majority of the cases of paralysis albuminuria was present, for, like the paralysis, albuminuria is shown by the tables to bear a very definite relation to the character of the primary attack.

Of the forms of palsy, that involving the palate is most frequent, followed by affections of the ocular muscles and cardiac and pharyngeal palsies, in the order given.

The time of onset varies in the different forms of palsy, that involving the heart is most often seen during the first fortnight, while the palatal involvement appears most frequently during the 3rd or 4th weeks, and the ocular palsies even later.

In certain very severe cases it may appear much earlier; such precocious forms indicate a profound intoxication of the nervous system, and are of

bad prognosis, early involvement of the palate being often associated with cardiac paralysis. When recovery takes place the duration of precocious palatal palsy is much longer than when it starts at a later stage.

With the exception of the early forms, which in cases that recover are usually persistent, the duration of palatal palsy is about three weeks, and of the ocular palsies about a week less.

The majority of diphtheritic palsies are abortive in character and may easily escape observation; only a slight nasal twang of the voice or a slight impairment of the power of accommodation may be discoverable. Variations in the extent of the palsy from day to day are often seen. These fluctuations are best illustrated in the case of the heart—at one visit outward displacement of the apex-beat and gallop-rhythm may be present, while at the next the heart may be apparently normal. Equally marked fluctuations in the character of the pulse occur. These changes are of bad prognostic import.

With the exception of early cardiac paralysis, the tendency of all forms of diphtheritic palsy is to recover. Apathy, vomiting, and restlessness, inequality of the pulses, weakness of the first heart sound, and subsequently a gallop-rhythm, especially if associated with temporary remissions, almost invariably herald a fatal termination.

Marfan has pointed out two new signs of grave prognosis in such cases, first, a progressive enlargement of the liver due to congestion and albuminous degeneration, and second, a scarlatiniform eruption on the knees and sometimes on the back of the elbows.

Next to cardiac paralysis involvement of the pharynx and diaphragm is the most serious. Especial care must be taken in feeding these cases to avoid choking or the occurrence of a septic bronchopneumonia.

The incomplete development and short duration of the majority of diphtheritic paralyses renders special treatment in most cases unnecessary. When regurgitation occurs food should be taken slowly and all fluids should be thickened. When young children cough over solid food, nasal or oesophageal feeding should be adopted, but where there is much cardiac dilatation, or the diaphragm shows signs of commencing paralysis, even this is unsafe, and the patient should be fed entirely by the rectum. Elevation of the foot of the bed in pharyngeal paralysis is useful by enabling the fluids to drain away through the mouth and nose. Atropin and strychnin are sometimes useful.

In cardiac paralysis absolute recumbency must be insisted on, food must be given in small quantities and drugs irritating to the stomach must be avoided. The bowels should be opened by enemata. R. has found adrenalin chloride useful in this condition, begun early and continued in increasing doses till the 14th day or even longer. He begins with 5 min. of the solution in one drm. of aqua camphorae, every 4 hours, and increases this to two drms. every two hours if necessary. If necessary it may be given by the rectum.

Syncopal attacks may be avoided by prolonging the period of recumbency and making the change from this position gradual. Weakness of the lower limbs should be treated by gradually increasing exercise or massage. Electricity has not proved very satisfactory. Fresh air is more important than tonics.—(A. W. Myers.)

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ORIGINAL ARTICLES.

DOUBLE PERFORATION OF THE URINARY BLADDER.*

BY EDWARD EVANS, M. D.

LA CROSSE.

Wounds of the bladder are amongst the rarest of surgical accidents. In the War of the Rebellion, out of 408,072 wounded there were only 183 wounds of the bladder, and those were all bullet wounds. In Bethany Hospital, in 8 years (1869-1876) there were 10,867 surgical cases and only three bladder injuries; in St. Bartholomew's Hospital (1869-1875) 16,711 surgical patients with only two bladder injuries.

On the other hand, wounds of the bladder, whether extra- or intraperitoneal, give a high mortality. Thus Bartels who collected all the published cases of injury to the bladder, numbering 504 up to 1878, notes 228 deaths, or a mortality of 45%, divided as follows:

Extraperitoneal.....373, with 85 deaths, 22 7-10%.

Intraperitoneal....131, with 130 deaths, practically 100%.

Hensgen, in his report of a case of perforation of the bladder, quotes Bardeleben and Koenig as both commenting on the high mortality of intraperitoneal perforations of the bladder.

Walter Rivington in an important monograph (Churchill, 1884) relates 152 cases of intraperitoneal rupture with 152 deaths.

These statistics are mostly of the pre-antiseptic days when immediate interference was rarely advised and more seldom practiced, and it is interesting to note in this connection that the one case saved out of the 131 cases of intraperitoneal rupture reported in Bartels' paper, was the case of Walters of Pittsburg, who did laparotomy 10 hours after the injury, sewed a two-inch tear in the bladder and saved his

*Read before the 58th Annual Meeting of the State Medical Society of Wisconsin, Milwaukee, June 24, 1904.

patient (and added another laurel to the wreath of American surgery).

Prompt intervention in competent hands now promises much better results, thus, statistics of Greig Smith (Abdominal Surgery) show in 49 cases of intraperitoneal rupture 19 recoveries and 30 deaths. Alexanders' paper is of interest here (*Annals of Surg.*, Aug. 1901). He collected all the cases of intraperitoneal rupture of the bladder treated by laparotomy, 45 in all, with a mortality of 50%, showing that what had been long desired and hoped for but scarcely expected by older surgeons, is now in a fair way of being realized.

One fact, noted by Larry and verified by the experience of surgeons in the American and Franco-Prussian wars, is that intraperitoneal gunshot wounds are not so serious as might be supposed. Agnew states that in the American war, of 183 cases, 87 survived the immediate effects of the wound. This is fortunate since bullet wounds of the bladder are the most common—of Bartels' 504 cases, 285 were bullet wounds.

Cases of wounds of the bladder being so rare, we might expect that injuries involving a double perforation of the urinary bladder would be exceedingly rare, *i. e.*, wounds of the bladder where one opens externally and the other involves the peritoneum.

After a fairly exhaustive search through the literature I have been able to find (through the kindness of Dr. H. Fowler of Washington, D. C.) only 5 cases, one of them a post mortem specimen, besides the one I now report.

J. B., age 18, while painting in St. Francis Hospital on May 4, 1897, fell from a scaffolding, falling on the end of a slat 18 inches long, 2 inches wide by ½ inch thick, with 2 wire nails 1¼ inches long driven transversely through the end; this entered through the perineum just to the front and left of the anus, tearing the sphincter ani and the wall of the rectum as well as the perineum upward for some two inches. It then entered the bladder transversely between the urethra and ureters, tearing a large hole in the trigone some two inches across; it then passed through the bladder and tearing a large hole in the fundus, entered the peritoneal cavity. The boy withdrew the stick himself, and with it drew out a piece of omentum about 8 inches long. When found he was in a state of considerable shock. He was taken to the hospital and immediate laparotomy was done. Considerable blood and urine were found in the peritoneal cavity, and this was washed out with large quantities of normal salt solution. The rent in the bladder, about 1½ inches long, was closed by three tiers of sutures, the first two of cat-gut, the last of silk. The abdomen was again irrigated and closed without drainage. Through the large perineal rent a drainage tube was introduced into the bladder and this was packed about with iodoform gauze; the boy returned to bed in good condition. In two weeks the abdominal wound was practi-

cally healed and without any event of note save severe iodoform poisoning, which gave a pulse of 140 and a temperature of 103° within 30 hours after operation, these symptoms rapidly subsided when plain gauze was substituted for the iodoform. On the 14th day the tear in the bladder and perineum and rectum was closed. It was interesting to note on examining the wounds with retractors, holding the perineal tear wide apart, that on account of the extensive laceration of the tissues and the wide tear in the trigone, the mucosa—at the point where the ureters entered the bladder—was converted into a convex surface on which the ureters could be seen discharging their contents.

Operation. With retractors the perineal tear was held wide apart, the edges of the tear were grasped with bullet forceps and drawn forward toward the anterior edge which was just posterior to the prostate, and held in proper position by the prostatic fascia. Two silk sutures on each side of the middle line were put in and tied and left long, and brought out by the side of the drainage tube, which was inserted into the bladder in the middle line. The rectal mucosa was then closed by a row of fine cat-gut sutures tied on the mucous surface. The ends of the sphincter muscle were approximated and secured in position by silk-worm gut sutures. The perineum was then closed by sutures of cat-gut as close as possible about the drainage tube. After this the boy made quite a satisfactory recovery. For a time there was a small vesico-rectal fistula; this caused some annoyance, because when urine entered the rectum in any quantity, he was troubled with diarrhea, and occasionally gas from the bowel would enter the bladder and cause some distress, while if the stools were liquid a small amount would discharge through the sinus left by the tube. By June 24th he could hold 6 ounces of urine, had to rise only once at night, and in two months the vesico-rectal fistula had healed, the urine was normal on examination, and he was practically free from any rectal or vesical annoyance. Two years later he was practically well in every respect and without functional disturbance of any kind, and so reports himself now, but refuses cystoscopic or other examination.

This case is interesting in several particulars:

First, in the fortunate circumstances surrounding the injury, allowing immediate laparotomy.

Second, in the extreme nature of the injury to the perineum and trigone, necessitating surgical interference for restoration of function of bladder, rectum and sphincter.

Third, in the complete restoration of function despite the severe injury to the trigone (and one would suspect to the seminal vesicles or ducts).

The rarity of the case, unique in some respects, the happy outcome, demonstrating as it forcibly does the value of early surgical interference, and the need of collective work where the experience of any one surgeon is very limited, are my reasons for bringing this case before the society.

SOME REMARKS ON THE USE OF OPIUM IN MENTAL DISEASES.*

BY ARTHUR W. ROGERS, M. D.

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At the outset it is well to call attention to the subject of this paper lest the error be made of considering it an exhaustive study of the action of opium and its derivatives in mental disease. On the contrary, I wish only to mention in detail and confirm with clinical records a few points in which opium has actual merit and where of late there has been a growing tendency to disparage its further utility.

You may have heard the expression, "Beware of the medical man who is too handy with his hypodermic." Doubtless there is considerable virtue in this warning since we are all familiar with the individual in and out of the profession who is altogether too ready to suggest the hypodermic for even the mildest ache or pain, and this is tantamount to using morphine from the layman's point of view. This hasty resort to the subcutaneous injection of morphine or the careless administration of opium in any form, naturally receives a great shock where a physician is accustomed to see and treat cases of addiction to this drug. In fact the average alienist is liable to develop the belief that this drug has no rightful place in his armamentarium. Thus you have the two extremes—on the one hand the man who lulls you to sleep and readily controls every discomfort of body with his fascinating little needle, and the man who so fears consequences that he often permits you to suffer altogether unnecessarily. Let us endeavor to discover the golden mean and first of all revive our knowledge as to the physiological action of opium.

Referring to the United States Dispensatory we find this statement:[1] "Opium is a stimulant narcotic. Taken by a healthy person in a moderate dose, it increases the force, fullness, and frequency of the pulse, augments the temperature of the skin, invigorates the muscular system, quickens the senses, animates the spirits and gives new energy to the intellectual faculties. Its operation, while thus extending to all parts of the system, is directed with peculiar force to the brain, the functions of which it excites sometimes even to intoxication or delirium. In a short time this excitation subsides; a calmness of the corporeal actions, and a delightful placidity of mind succeed, and the individual, insensible to painful impressions, forgetting all sources of care and anxiety, submits himself to a cur-

*Read before the Milwaukee Medical Society, Feb. 14, 1905.

rent of undefined and unconnected but pleasing fancies, and is conscious of no other feeling than that of quiet and vague enjoyment. In doses insufficient to produce the full soporific effect, the stimulant influence upon the mental functions continues longer, and the subsequent calming effect is sustained for hours, sleep being not infrequently prevented or rendered so light and dreamy that, upon awaking, the patient will scarcely admit that he has slept at all."

The two words "stimulant narcotic" afford ample text for our discourse and offer an explanation of the value of opium in the class of cases to which I desire to call your attention. A narcotic is a drug which produces narcosis or numbness, a condition in which pain is deadened and anesthesia is more or less complete. Opium is first of all then an anodyne or pain killer; furthermore, it improves the heart action, warms the skin, increases muscular tone, quickens the senses and stimulates the intellectual faculties.

Now, in considering the symptoms to be met in these psychopathic cases, you will observe that opium is thoroughly indicated. The derivatives of opium are practically never of service in treating mental diseases. One is scarcely ever justified in exhibiting this drug for hypnotic purposes only, and we find ourselves limited really to two preparations, *viz.*—the powdered extract and the deodorized tincture, and further, the uses of these are practically limited to two or three conditions. Our experience coincides in the main with the great majority of authorities so far as action and indications for this drug are concerned. Clouston is the only observer I can discover, who has been disappointed in its use, but his statement was made in 1897. He says:[2] "Opium I greatly disbelieve in. I performed a series of elaborate experiments with it in melancholia and it always caused a loss of appetite and a loss of weight in every case." On the contrary there is practically a uniform belief in its efficiency in relieving mental pain and anguish so frequently seen in cases of melancholia. Spitzka[3] states that opium has a "direct influence on the mind, antithetical to the painful emotional state of melancholia and to the persecutory delirium of monomania." Kellogg[4] says, in his recent text book on mental diseases, that the "anodyne action of opium, as a modifier of psychalgia has led to the opium treatment of melancholia. The mental distress is greatly mitigated and the attack apparently abridged in some cases, which go on to complete convalescence under the influence of the remedy. Painful hallucinations in exhausted states of mental disorder are in some cases checked by opium."

Our personal claims for the merits of this therapeutic measure lie in the action of opium in melancholic cases accompanied by intense and almost continuous mental pain, precordial distress and the fear

and apprehension of impending death or disaster. This suffering is such as to produce anorexia and consequent loss of weight and strength, motor excitement, insomnia, and these fears are present even in the patient's dreams. Many of these cases are driven to despair and find a happy release in suicide or death from exhaustion. It is here that opium properly administered exhibits its true anodyne action, partially anesthetizing the supersensitive brain. Its sedative effect upon this mental hyperesthesia tends to improve the individual's sleep, to stimulate the appetite, aid digestion and increase nutrition, and all other physical and mental functions are discharged more naturally. Distinguished from these cases of continuous mental distress are those subject to periodical attacks of the "blues" or periods of recurring depression lasting from a few hours to an entire day. These patients will tell you that they feel the attack coming on and ask for assistance. They feel their mind going or fear they will injure themselves or commit some awful crime. They abandon themselves to their fears, refuse food and treatment, and exhibit more or less excitement, yet will yield readily to a brisk dose of opium, accompanied by firm suggestion.

I maintain that the successful exhibition of opium in mental diseases depends on several essentials:—Opium is much inferior to other hypnotics and is rarely indicated in insomnia. Its chief use is that of an anodyne and it is of but little service in other than painful mental conditions. It is contraindicated in maniacal states, collapse, fatty, dilated or other organic heart lesions. Its method of administration is always important. As a rule it should be given by the mouth, for patients with persecutory or hypochondriacal ideas are very apt to interpret a hypodermic injection as an assault, an impregnation with poison, or in some other delusional way by starting up a new train of delusions which counteract the results we are seeking. Where the pain or mental distress is continuous, the dose should be administered three or four times daily in increasing doses until the patient is fairly comfortable, and continued for a few weeks, when a gradual reduction can be made. In cases of periodical mental pain a large dose should be given at once with the hope of aborting or at least lessening the severity of the attack. The patient should never know the nature of the drug, thus forestalling any possibility of forming an addiction. It is my custom to use the deodorized tincture of opium, beginning with ten drops three times daily and increasing one drop daily until sixty or ninety drops are taken each twenty-four hours. It can be administered in a tonic or other simple preparation at meal time. The patient believing his increasing ease

of mind and the general amelioration of his symptoms to be due to natural improvement, as a result of treatment, is greatly encouraged and willing to put forth additional effort. The reduction should be made very slowly and in some obstinate cases the dosage remain stationary for several days at varying intervals. The powdered extract of opium is often used, but is not so convenient of administration and contains the nauseating and depressing principles which have been removed in the deodorized tincture.

The chief objections that this treatment suggests are the possibility of forming the opium habit, which is practically nil, if the proper precautions are observed. Again, in some instances the bowels are constipated and the stomach unsettled. Here it is necessary to give a gentle laxative at first, yet with prolonged use it will be found that the intestinal canal soon resumes its functions, or at the worst these disturbances can be readily regulated. In fact I have often observed actual improvement in intestinal tone and regularity supplant a condition of prolonged constipation.

I now desire to illustrate the points above mentioned with a few clinical cases.

The first is that of a man *act.* 62, married, one child 32 years of age and in good health. Mother always erratic and died of some cerebral complication. One sister committed suicide while insane. The patient had always enjoyed good health and strength but had been neurotic and was considered "peculiar." He had been a successful railroad man, was given to no excesses but for years had been irregular in matters of vacation and exercise, and had constantly been committing indiscretions in diet. These habits, along with prolonged worry over an invalid wife, resulted in nervous dyspepsia, insomnia, marked restlessness, depression, delusions and suicidal tendencies, which reached a climax a few days prior to his coming under observation, when he made a determined attempt upon his life. The examination gave evidence of no organic changes other than pronounced arterial thickening. The deep reflexes were all very active. His appetite was practically gone and bowels obstinately constipated. The mental picture was one of great depression and despair. His fear of insanity interfered with his sleep, and during the day he was unable to keep still more than a few minutes at a time. There was marked hyperesthesia of the entire nervous system so that every sound was so magnified as to pain and irritate him. His chief complaint, however, arose from his painful thoughts and his fear of self-destruction. The first night 20 grains of sulphonal and the same amount of trional gave him but three hours' sleep. The following day he was given 20 drops of the deodorized tincture of opium at each meal and that night he slept six hours, awaking very refreshed and somewhat less depressed. The dose of opium was rapidly increased to one and a half drams each twenty-four hours. At the end of the first week he was

sleeping six to seven hours each night and two or three hours during the day without further hypnotic medicine. His appetite had improved and his bowels were fairly regular. His depression began to lift, he wanted to live and the delusions disappeared. During the second week the opium was slowly reduced, yet he continued to improve. In four weeks this patient was sleeping and eating well, had gained four pounds in weight and was free from all depression. In short he had sufficiently recovered to return home and resume his business in a moderate way.

The following case of climacteric melancholia was somewhat more obstinate. Patient *act.* forty-seven, had four children, all in good health. There was no special hereditary influence. Her previous history had been one of impaired health dating from her 13th year. She had an attack of melancholia when 20 years of age following the birth of her second child and made a good recovery. The attack in question apparently resulted from the hard work of a farmer's wife, the rapid bearing and rearing of her children, and the exaggeration of her naturally nervous temperament due to climacteric changes. During the eight months prior to coming under treatment she had been losing physically and gradually growing more depressed. An attempt at suicide brought her to my attention. At this time she was quite reduced in bodily health and unable to get any natural sleep. She was depressed and desperate; said she did not wish to live because she was an outcast; God had forsaken her; she could never recover and she was only a disgrace to her family. Her suffering was intense and she would walk the floor much of the time day and night, wringing her hands, bemoaning her fate and begging for poison. This patient was given rapidly increasing doses of the deodorized tincture of opium in the same manner as mentioned above. When she was taking one dram each twenty-four hours the increase was stopped. No other sedative or hypnotic was given during her illness, but a placebo was administered at bedtime occasionally in response to her entreaties for something to make her sleep. There was a gradual cessation of her active symptoms. She was able to keep more quiet during the day and could engage in healthful employment. Her sleep was refreshing, the suicidal impulses disappeared and her acute mental pain was so much under control that her natural ideas and tendencies had an opportunity to assert themselves. The opium was slowly withdrawn after the fourth week with only an occasional recrudescence of her former symptoms, when the dosage was temporarily increased. In eight weeks' time this patient was again in her home at work and during the past four months has continued to improve.

The last case is that of a single woman, *act.* 47, with good heredity—a case of climacteric melancholia and marked by pronounced hysterical outbursts. The patient had worn herself out during 30 years of work in the public schools, and her present sickness developed suddenly following an unpleasant scene with her principal. She lay in bed for some weeks, refusing food, sleeping but little and having too little interest in life to make much effort in her behalf. At the time of my first visit I found a woman bedfast from exhaustion due

to long continued fasting and prolonged insomnia. Her depression was profound and her despair so complete that she often refused food and asked only to be left alone to die. Along with the ordinary stimulating treatment opium was begun and in ten days she was taking about one dram of the tincture three times daily. In two weeks she was sleeping 4 to 6 hours without other drugs. Her appetite was fair and constipation less troublesome. She was more cheerful and willing to be helped. Her improvement continued and in six weeks the reduction of the opium began by dropping off one minim daily. During the last week of the dosage her unfavorable symptoms returned with considerable force and increased vigor when the drug was entirely discontinued. In two weeks the opium was again begun in increasing doses with as favorable results as before. The dosage was maintained for a longer period and the reduction made by dropping one minim every fourth day and every 4 to 5 days the dose was held stationary for a few days, making the reduction very slowly, as you will observe. This patient improved steadily but once in ten or twelve days had an hysterical attack when she was very depressed, oppositional and quite uncontrollable. After a few such seizures 20 to 30 drops of opium were given when an attack was impending, with the result that they were much abridged and lessened in severity and eventually appeared with much less frequency. At the present time this patient's recovery seems assured.

In closing I wish to emphasize two points. The average physician is either over-cautious in the use of opium in mental diseases or uses it indiscriminately, or more often ill-advisedly. Its indications have been given and here it should be used in heroic doses to secure the desired results. Many practitioners called to see an acute psychosis resort at once to the hypodermic use of morphine with the idea of controlling the disagreeable symptoms, but they more often aggravate the condition or establish new symptoms. I have seen cases for the first time when they were either stuporous and all their symptoms in abeyance from over-dosing with morphine, or wildly excited from its effects, and in a few days of immunity from the drug clear up and improve rapidly under other medication and treatment.

Risking repetition I would again call attention to the necessity of administering opium in mental diseases in such a manner that the patient never knows what he is taking, and further to remark that I do not desire to leave the impression that I believe opium will act favorably in all these cases, but it should at least be given an early trial.

REFERENCES.

1. U. S. Dispensatory, p. 1000.
2. Clouston, Mental Diseases, p. 131.
3. Spitzka, Manual of Insanity, p. 388.
4. Kellogg, Text-Book of Mental Diseases, p. 405.

CHOREA GRAVIDARUM.*

BY GEORGE SEILER, M. D.

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Chorea during pregnancy is so rare a disease that no excuse is required for the selection of this theme.

While the literature of chorea, or Saint Vitus dance, is extremely voluminous, that of chorea during the pregnant state is very scarce, in fact, we can only find some scattered cases of this form of the disease in medical journals or an article in works of obstetrics, or in a reference handbook of medical sciences.

Chorea during pregnancy may be divided into cases of true chorea, or hysterical chorea, and a mixed form. It may appear at any stage of pregnancy, especially in primiparæ. It usually appears in the earlier part of pregnancy, persists generally until the beginning of labor, or it may persist some time after the puerperium, and may reappear in subsequent pregnancies. A girl who has suffered from chorea during childhood will almost surely become choreic during pregnancy. Some cases originate during the latter part of pregnancy and during labor. The affection is then considered a very grave one, and in many instances ends fatally, or is followed by mania, generally of a transitory type.

Chorea, as stated above, is more common in primiparæ, and according to Axenfeld, is quite likely to be associated with hysteriform or epileptic convulsions, which lead to possible abortion. Hysterical patients are very apt to get the mixed form of chorea during pregnancy. In some cases the movements are worse when the patient is lying down. The chorea of pregnant women, although sometimes unilateral, is more apt to be bilateral, and the tongue is involved. This was first pointed out by Romberg. The lighter form—which is quite common—begins during the early months of utero-gestation and is probably due to some reflex irritation from the sexual organs, and its prognosis *quo ad vitam* is not especially bad. Chorea is more serious in multiparæ. A woman affected with severe chorea may die before or after giving birth to a child; if she aborts the chorea does not always stop. The effect which chorea produces upon the pregnancy depends entirely upon its severity. In mild cases amenable to treatment, the pregnancy is not interrupted, while in severe cases abortion occurs, sometimes followed by fatal termination from coma.

*Read before the Green County Medical Society.

If the pregnancy is at term when the mother is attacked by chorea, the risk to the child is increased but very little, if any. As regards the influence of chorea upon labor, choreic movements often cease when labor pains set in; they generally die away during the stage of uterine contractions, often to re-occur as soon as labor pain is over. While there is a temporary lull in the choreic movements after the birth of the child, the effort to expel the placenta is usually followed by exacerbations. During the puerperal state, about the third or fourth day, the choreic movements become more than usually increased, and the irritation of nursing the child sometimes aggravates the disease. Sometimes after delivery, the choreic movements die away gradually, but they have been observed to continue from five to twenty-four months after labor. No child born alive of a woman suffering from chorea has ever been affected with chorea.

Etiology. Constitution has no influence; some women attacked with the disease are feeble and delicate, others are robust and strong. Emotion, anger, fright, mental trouble may be the cause of the attack. Some observers believe that chorea is very often a sequel of acute rheumatism, others deny this. That chorea often follows an attack of rheumatism or endocarditis, and that patients suffering from chorea often complain of wandering rheumatic pains before the attack, cannot be denied.

Whether, as Eichhorst states, chorea originates reflexly whereby the diseased heart irritates mechanically the phrenic nerve, we will not discuss. The fact remains that chorea often follows an attack of acute rheumatism or endocarditis, and fevers, especially of a zymotic nature, like scarlet fever or measles. The real cause of chorea gravidarum can seldom be ascertained. It remains up to the present time a riddle, and to dig deeper in the labyrinth of opinions would be useless. I think we come nearest to the truth, if we consider chorea a neuropathic symptom-complex based often on a hereditary diathesis.

Pathology. While some observers consider the disease of cerebral origin, most observers favor the theory that the disease is an embolic process and that the corpus striatum is its seat. Kirke says that chorea is the result of irritation produced in the nerve centers by fine molecular particles of fibrin, which are set free from an inflamed endocardium, and washed by the blood into the cavities of these centers, causing there capillary emboli. Other observers conclude that the seat of chorea is in the cells of the posterior horns or in fibers connecting them with the great motor centers. In all severe cases some grave embolic lesion must take place, and this is probably the result of the peculiar condition of the blood. Cerebral venous throm-

bosis has been found in lethal cases. Numerous post mortem examinations have been reported, the most important of which are those of Meynert and Ellisher (Archiv. f. Pathologische Anatomie), who found changes in the peripheral nerves, as well as cerebral lesions. The different results of post mortem findings show that fatal chorea may be found with cerebro-spinal texture alterations of inconstant character.

As to the prognosis of chorea gravidarum, I have already stated that the lighter forms, which occur in the earlier months of pregnancy, are amenable to treatment and generally recover. In the severe cases, which occur in the later months the mortality is high. Spiegelberg and Fehling speak of 69 cases with 21 deaths. This high mortality is not due to the contortions themselves, but to the exhaustion following the attacks, or to the diseases of the brain and heart, which are found to exist in fatal cases.

The diagnosis of the disease is easy, and I refer to the text books.

Concerning the treatment, the latest authorities recommend heroic doses (30 to 40 grains) of hydrate of chloral, repeated as often as necessary to produce rest and sleep. Others favor hypodermic injections of morphia, or opium in some other form. Where the mind is deranged and restraint is necessary hypodermic injections of hyoscine are highly recommended. As will be seen in a case which I will cite later on, dilatation of the cervix may be tried as is done for uncontrollable emesis, and I think it is worthy of a trial. The best way to dilate is with the uterine dilator or with one or two fingers; a Voorhees bag is then inserted empty, filled with water and withdrawn to some extent and left till pains set in; if this does not happen another larger bag is introduced. But the main question in the treatment of the severe cases is whether or not artificial abortion should be produced. In those cases which endanger the life of the patient this certainly ought to be done, and it has been done with variable success. If we would be certain in such a severe case, that we could cure the mother of the disease and save the life of mother and child, a vaginal Cæsareotomy might be done as the last heroic measure.

I will now relate four cases of chorea gravidarum, the first one of which I saw fifteen years ago, the second reported by Dr. Varquardson in the *New York German Medical Press,* the third reported by Dr. Jacobi, and the fourth a case which I saw in consultation with my friend and colleague, Dr. Blumer, of New Glarus, about eight months ago.

The first case of chorea gravidarum I saw was that of a married woman of good proportions, rather anemic, 22 years old, a primipara,

pregnant three months. Two weeks before she consulted me she noticed slight convulsive movements in different parts of her body, which increased the next four weeks to almost continuous convulsions of nearly all the voluntary muscles of the body, including those of the tongue. Rest treatment, bromides, hydrate of chloral and arsenic in increasing doses were prescribed. In the course of two months the patient improved to some extent, the choreic movements becoming less severe; she was delivered in time of a healthy child, but suffered from a mild form of chorea for one year after confinement. This patient had chorea during childhood.

The second case I found reported in the *New York German Medical Press*. The patient was 21 years old, primipara, five months pregnant. The choreic movements developed slowly; as in the first case they were bilateral and the muscles of the tongue and of the eyes were affected. Large doses of hydrate of chloral, one-half to one dram, one-half grain doses of morphium hypodermically were administered, but with very transient or almost no effect. The question of induction of artificial abortion was discussed in a consultation. One of the consultants suggested dilatation of the cervix uteri, considering or believing chorea, like the uncontrollable emesis gravidarum, to be a reflex neurosis. As he could do absolutely nothing with the finger, he introduced a laminaria tent which he left in about twelve hours. The next day he introduced a sponge tent, the third day a still larger one, and the fourth day the largest one he had; they were left in about eight hours. He of course expected to bring on an abortion. During this treatment, and as soon as twenty-four hours were passed, the convulsive movements abated more and more and on the fifth day the patient commenced to speak again, although in a jerking way, and slept a couple of hours. From this day on the condition of the patient steadily improved, and she was delivered in due time of a healthy child. After confinement the chorea stopped. This case is interesting, first, because the dilatation of the cervix was followed by an abatement of the severe choreic movements on which the administration of medicine alone had almost no effect; and secondly, because the introduction of several sponge tents did not produce an abortion, nor even pains.

The third case of puerperal chorea was reported by Dr. Jacobi in the *American Journal of Obstetrics*. The patient was a married woman, 23 years old, in labor with her third child. When first seen she was affected with bilateral convulsive movements of the face, body and extremities, resembling those of chorea. Her mind was clear. For two months, she stated, she had been suffering from spasms which gradually increased in severity. During the whole time she suffered greatly from insomnia. At 5 o'clock on the day of admission to the hospital she was delivered of a healthy child at full term. Chloroform was required to keep her in bed during labor, and subsequently her convulsions and contortions increased to such a degree that manual restraint became necessary. She was thoroughly conscious and stated that she tried, but in vain, to control her involuntary movements.

Later in the evening she became more violent, and neither morphium nor bromides had any influence upon her. She would sometimes sleep for an hour, but every slight noise would arouse her to attacks as sudden as they were violent. Morphia in one-fourth grain dose was administered hypodermically, breathing became very slow and deep, pulse quick, and respiration reduced to six per minute. Towards daybreak hydrate of chloral was used, also whiskey. Respiration slowly increased, temperature at 10 o'clock, A. M. was 100.5°, pulse 100, respiration 20. During the day the patient slept a good deal without chloroform. Treatment was continued. During the afternoon of the day of confinement and while her contortions certainly closely resembled those of chorea, a peculiar wild staring expression of the eyes and the absence of reflex contortion on digital examination per vaginam led him to doubt the accuracy of the diagnosis and to suspect the possible inception of an attack of puerperal mania. The subsequent course of the case showed the first diagnosis to have been correct. The heart and urine were normal. The second day after delivery, the patient was very quiet and hard to rouse, and the next morning she seemed to be in a semi-comatose condition; it was impossible to rouse her. All night she remained in the same condition but would at irregular intervals give a sudden prolonged cry, and a few choreic movements would then be noticed. Some time later symptoms of acute mania were noticed, but in the course of a week the patient improved rapidly under tincture of hyoscyamus which at first was given in full medicinal doses and later increased until the physiologic effects were produced. The chorea improved before the mental symptoms became more favorable, and at the end of the second week the patient became entirely rational and a complete recovery followed.

The fourth case is one I saw in consultation with Dr. Blumer of New-Glarus, April 19, 1904. This patient, a native of Switzerland, came to this country two years ago; she was 26 years old, a primipara, 6 months pregnant, robust and plethoric. The anamnesis was negative—nothing could be elicited from her husband as to what diseases she had had before she was married. Up to four weeks previously she had been perfectly well; then slight choreic movements in the left arm and leg began, later the right side was also affected. During the past three days the choreic movements had become very severe and continuous, affecting all the voluntary muscles of the body. As in all the severe forms of this disease this case was characterized by the rapid evolution of very severe motor disturbances which accompanied a profound nervous autointoxication. The patient made all kinds of contortions, would abruptly raise one arm or a leg, opisthotonus and pleurothotonus followed each other, she would thrust out her tongue, make grimaces, call out some incoherent words and had a wild expression in her eyes. Patient could be partially roused from her stupor to take medicine, but the contortions of the face and neck made it very difficult to administer medicine. The contortions of her spine were so severe that it took two persons to restrain her from falling out of bed. Dr. Blumer had given her bromides, hydrate of chloral, and morphium hypodermically but with very little and transitory

effect. It was then that the doctor called me in consultation, mainly to decide whether artificial abortion should be induced. We increased the dose of hydrate of chloral to 40 grains, but even this quieted her only one to two hours. Under deep chloroform narcosis—which relieved the contortions to some extent—I tried to dilate the cervix with the uterine dilator and fingers, but although I tried this for about an hour I could only introduce one finger, the cervix or rather the mouth of the womb contracting tetanically. The membranes burst and considerable liquor amnii escaped; whether this was a fortunate occurrence I do not know. Towards morning she became a little quieter and slept two hours. She had passed no urine during the night. Hydrate of chloral was again administered at 8 o'clock A. M., and when we left the patient at 9 o'clock she was resting better and the choreic movements had abated to some extent. Between 1 and 2 o'clock P. M., the patient had a very severe attack of convulsions and was unconscious all the time. Dr. Blumer introduced a catheter and drew some urine which contained considerable albumen. He also introduced a catheter into the womb. No pains set in, however, and the patient died in a comatose condition between 3 and 4 o'clock the next night. The peculiarities of this case are that, like in the other cases mentioned, no pains set in, and that the woman died without previously giving birth to the child. Whether she died from uremia or from a brain lesion, probably an embolus, I cannot decide.

CARCINOMA OF THE BREAST.*

BY G. F. SHIMONEK, M. D.,

MILWAUKEE.

It must be admitted, although reluctantly, that a retrospective view clearly demonstrates that no advancement in our knowledge of carcinoma has been made. Not even does the immense amount of research work indicate as yet the lines along which future experimentation might be productive of good. With the exception of the great improvement in the operative technic, we cannot point to a single item, worth mentioning, that has been of any benefit to the patients afflicted with carcinoma. The comparatively recent surgical possibilities are dependent on the science of bacteriology, having absolutely no relationship with any greater knowledge of carcinoma.

Practical experience has long ago demonstrated the vital necessity of carrying the required incisions as far as possible from the tumor; their utilization has, however, been curtailed, if not prohib-

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ited, by the etiologic factor of sepsis. Therefore all that can be consistently claimed respecting the treatment of wounds in general depends upon the discoveries of the immortal Lister. Surgeons have justly become more aggressive because of the uniformly kind response of the individual tissues and the system at large to modern surgery. Any operation of whatever magnitude or intricacy can be carried to a successful issue by any one who is conscientious and learned in the necessary details. This is evidenced in the prolongation of life and in the many cures of carcinoma of the breast. The different conduct of carcinomas, even of similar histologic structure, would seem to point to some material difference in their etiologic factors or to the and will—in many cases—accomplish what protracted rest cures have distinction of constitutional peculiarities, if one may judge by the degrees of malignancy—for some rapidly recur, after extirpation, and almost uninterruptedly proceed to a fatal termination, while others may not return for many years or not at all. Usually the amount and kind of the cellular constituents is a key to malignancy and to recidivation, but occasionally, as stated above, a tumor, which seemed to be, so to say, dormant, suddenly springs into malignant activity, as if by magic, after a surgical intervention or some other injury, and goes on rapidly to a fatal termination. Whether this is due to the stimulation by the trauma due to the manipulation of the tumor itself or to some transformation of the soil in which it has its habitat, or whether it is dependent on some constitutional or other changes which so alter the pabulum as to increase the virulency of the materies morbi, are matters of speculation only.

Excluding those recidivations which are due to grossly incomplete removals, or so-called continuous recurrences, science cannot offer any rational explanation before the casus morbi has been positively demonstrated.

If micro-organisms be the cause, their destructive action might be held in abeyance, or they may succumb to their own toxins; for it is a known fact that carcinomas have, in some mysterious manner, spontaneously, completely, and permanently disappeared. Analogous circumstances frequently occur respecting many of the septic and specific microbes, for instance the bacillus coli, streptococci, and others, are at times apparently inert and again violently virulent; why this is so are matters transcending the present bounds of scientific knowledge.

If the past is to be an indication of the future, then we may rest assured that victory will crown the efforts of the many indefatigable investigators.

Because of the apparent impossibility of removing every ion of infectious matter by the means at our disposal, it seems logical that all recurrences must be due to the retention of some particles of the tumor, and yet the first inoculation or infection is presumably in normal tissues. Is that due to some faulty function or construction which invites infection and finally yields and becomes pabulum to a rapacious foe?

That all individuals are not equally liable to contract inoculable or infectious diseases is a matter of every day observation. It would, therefore, appear that there must, of necessity, be at least two conditions requisite for the inoculation and propagation of carcinoma, *i. e.,* the efficient cause or that which directly brings about the disease, and the predisposing cause. Under the latter may be mentioned histologic and physiologic inefficiencies, and the like. The latter seems to be partially corroborated by the fact that carcinomas occur very much more frequently during the ages of the cessation of the various functional activities.

Diagnosis. The difficulty in arriving at a correct decision in any individual case depends on the stage of the growth. In the very beginning it may be impossible to distinguish it from other tumors of the breast, such as cysts, adenomas, sarcomas, etc. It is not necessary, nor is it the purpose of this paper to dwell on the minute differentiation, for there are abundant opportunities in medical literature so that any one may and should study it at his leisure. The tumor appears in a woman advanced in years, usually during the menopause, as a small painless nodule which is usually discovered by accident; it is not sensitive to pressure, and is movable. These facts should be borne in mind, for unless attention has been especially drawn to the symptomless beginning of a mammary carcinoma, one's mind is apt to associate sharp and lancinating pains as a characteristic of that kind of neoplasm. The tumor, in the vast majority of cases, appears in the upper and outer quadrant of the breast; this, however, is not peculiar to carcinomas for it may commence in any other quadrant. Benign tumors are found in the same localities with about the same frequency. But taking the age of the patient into consideration such a tumor will prove to be a carcinoma in about 85 per cent. of all cases, so that founding the diagnosis of cancer on the objective manifestation in connection with the advanced age of the patient, is justifiable but not conclusive. The tumor may be removed or a spear may be thrust into it. under cocaine, and a small fragment removed for purposes of microscopic examination. This aid

to diagnosis is certainly laudable, it being the only way to make a positive diagnosis, and positive diagnosis in the very beginning of such a serious thing as cancer is what establishes the supremacy of surgical intervention over all other forms of treatment. But recent observations show that this procedure is not altogether without danger of disseminating inoculable material into sound tissues. In recent literature there are many cases of carcinomas which have been implanted into the edges of the incision at points situated at considerable distance from the original site of the disease. Such an accidental inoculation occurred in one of my cases of cervical carcinoma: a slight trauma was done to the edge of the perineum and in the course of several months a hard nodule developed in the scar which gradually involved the whole vagina and finally the pelvis.

After the tumor has more extensively indurated the breast, which brings about the retraction of the nipple and pitting of the skin directly over the tumor, with enlargement of the axillary and supraclavicular glands, no one should be guilty of making a wrong diagnosis, but in such a neglected case it matters very little, so far as a cure is concerned, whether the proper diagnosis has been made or not, and yet there are many such advanced cases that have all but permanently recovered after a complete removal; at any rate, many women are living in perfect health years after the operation. So it is paramount to make a correct diagnosis when a mistake is inexcusable, aside from the necessity of protecting the standing of surgery.

The retracted nipple is an important symptom when it exists, but unfortunately it is present in only about 50 per cent. of the cases. The pig skin or the dimples of the skin over the tumors are more often present, hence of greater value than the former. This condition is brought about by the advancing carcinoma shortening the suspensory ligaments of Sir Astley Cooper. It is well to take into consideration inflammatory diseases of the breast which may bury the nipple by the infectious edema, but a knowledge of such a possibility being mistaken for a carcinomatous retraction is sufficient to exclude it. It is, therefore, all important not to rely on any one individual symptom, but to get all the evidence in the case togeher and to logically weigh it.

The case reported in this paper for the first time, shows that men of world-wide reputation may and do make serious and apparently inexcusable mistakes.

Prognosis. Without operative intervention death is almost sure to follow in the average case, in about two years. The very few

cases of the spontaneous disappearance that occur here and there, should not at all modify our judgment of the constantly fatal outcome of breast carcinomas. The prognosis after a complete operation depends upon the time when the patient came under observation.

Records now show a constantly increasing number of permanent cures, because people are becoming more alive to the advantage of timely removal. On the whole it is advisable, whenever a strong suspicion of carcinoma is entertained, to proceed at once to a complete removal, not only of the tumor itself, but of all tissues that harbor the lymphatics, *i. e.*, the adipose, fascial, glandular, and often the muscular tissues as well. When no doubt exists as to the nature of the tumor, nothing short of the removal of all of the tissues concerned will suffice. In advanced cancers of the breast the pectoral muscles undoubtedly become involved, so it is not sufficient merely to strip the muscles of their fascia, but the excision of both the major and minor pectorals is positively demanded.

The mortality of the present thorough operation is so low, only about two per cent., and the final results are so good, that no one should hesitate for one moment to resort to it even though positive diagnosis has not been made. It is far better to subject a patient to pain and other inconveniences of a complete operation 15 times in a hundred cases, than to expose 85 per cent. to the terrible physical and mental agony and the final death of undoubted carcinomas which could probably have been obviated early. So long as our diagnosis can not always be certain in the very incipiency of the disease we are in duty bound to respect the demands of the majority. Besides this, there is a certain proportion of benign growths that finally degenerate into malignancy, so we are doubly justified in advising and urging the importance of early removal.

Treatment. That the knife wielded by a master hand stands out prominently to-day as a champion with which to fight the destructiveness of cancer, needs no argument. But used by any one else it brings discredit to surgery and makes people hesitate to submit to it. The people at large cannot judge who is or who is not able to do the operation properly. There was a time years ago when almost anybody could whack off a breast with not worse ultimate results than that of the most eminent surgeon, but to-day one must be possessed of knowledge and be by nature skillful to do this most extensive operation with benefit to the patient and with credit to surgery.

The Röntgen ray, caustics, injections and all other applications should find no place in operable glandular carcinomas. As an auxiliary to the complete operation the X-ray is probably of considerable

value in delaying the recurrence of cancer or even possiby destroying matters that were invisible at the time of the operation. It should, therefore, be always used subsequent to an operation, at intervals of a week or two for at least a year, and at longer intervals after that time. It is not necessary to burn the skin, as thought at one time, to attain valuable service; the burn is a determinent as it hinders further use of the ray for a long time, because of the difficulty of curing it; mild applications will accomplish all that can be hoped for. In inoperable cases the ray may do some good by quieting pain, but beyond this it is probably useless.

Because the following report covers diagnosis, prognosis and treatment quite thoroughly, I deemed it proper to give it in more or less detail.

Mrs. J. P., married, multipara, several miscarriages, age 46, previous health good. This patient came under observation some 9 or 10 years ago when a tumor about the size of an English walnut was discovered in the upper and outer quadrant of the left breast, midway between the nipple and the periphery of the breast. It was painless and movable, the nipple normal. Another one of the same consistency and size was found in the axilla. She did not know how long they had existed nor which one appeared first. No other glands were palpable. I advised the removal of both growths to examine they microscopically, and be governed entirely by the findings. She sought further advice in another city and consulted two surgeons who enjoy world-wide reputation. One told her that it was malignant and a complete operation was imperative. The other said it was benign and the whole breast would not have to be sacrificed. So she came home and one of our foremost surgeons removed the tumor in the breast, but not the one in the axilla. After several months the axillary tumor began to grow rapidly; this was thoroughly removed by the former surgeon, at which operation I assisted. The surgeon in charge expressed the opinion that the breast would not have to be removed in spite of the fact that the scar from the first operation appeared a little suspicious, but the scar was excised. Recurrence followed both in breast and axilla in about two years. The tumor in the breast is situated in the nipple, the areola is infiltrated, nipple is ulcerated and is covered by firmly adhering scabs, nipple is not retracted but very prominent and hard to the touch, skin is not dimpled, the tumor in the axilla is situated directly beneath the pectoralis major, is slightly movable, tender and painful. The arm since the last operation, three years ago, has been swollen but not edematous.

Operation on August 25, 1901. Removed the entire breast with two-thirds of the pectoralis major; raised the pectoralis minor, under which was found an enlarged gland, removed every particle of fat, found a nodule beneath the pectoralis major opposite the nipple. The axillary tumor did not adhere to the chest wall very firmly. An

accident occurred in separating it from the chest wall with my finger, a small opening having evidently been torn into the chest cavity, because a sudden whistling sound was heard and some bubbles of air were seen issuing therefrom; a stitch and compress stopped it. There was some dyspnea and a rapid pulse for a day or two. The surface left after the removal of the breast was covered by Thiersch's grafts which nearly all adhered. In about 10 months a tumor developed on the anterior aspect of the chest below the clavicle, movable and tender. The arm was greatly swollen. Removal was urgently advised to be followed by the ray treatment. The patient objected very seriously to any further surgery, so it was decided, against my earnest advice, to subject it to the ray first. The ray treatment was apparently followed by a very marked improvement, as the tumor seemingly diminished in size after a few treatments and the pain in the arm lessened. But I am not at all convinced that this was really true, because examination could not be satisfactorily made on account of a very severe burn; however, the tumor became much less prominent, and on gentle touch it seemed as if it had been flattened out. The burn necessitated the discontinuance of the ray treatment, the tumor during this time apparently diminishing still more, but in a short time it commenced to grow quite rapidly, and then the patient very reluctantly consented to its removal. The chief symptom complained of was a sharp pain in the arm necessitating the use of morphine to secure rest at night.

On April 30, 1903, the tumor was removed. Arteries, veins and nerves were intimately united with it and closely matted together. The brachial plexus was tightly grasped by the tumor, the individual cords firmly adhered to one another. The brachial cords were greatly enlarged and nodular; the subclavian artery was imbedded in the cancerous mass and had to be sacrificed. The tumor was firmly attached to the surrounding tissues, making its separation and removal extremely difficult. Seemingly no parts of the neoplasm were left excepting that which involved the brachial plexus, and this could not be dealt with without at the same time sacrificing those important structures, and as I had no such permission, operation had to be stopped. The arm should have been removed at the shoulder, but to this the patient would not consent. Nothing short of this could be considered anything but of temporary expediency. The patient suffered extreme pain of a piercing nature in the arm; morphine had to be constantly used to secure any sleep or respite from pain. Röntgen ray was used daily after the last operation in 1903, but absolutely without any benefit, not even to ease the pain. The arm gradually lost both sensation and motion, but suddenly became almost completely paralyzed in both motion and sensation. Of course, this showed the progressive destruction of the brachial plexus and the sudden annihilation of the conductivity of the nerves. About nine months after the last operation a tumor appeared in the subclavian triangle of the left side; this was considered simply as a progressive growth of the above stated condition of the brachial plexus.

On March 25, 1904, the tumor was exposed through a large flap-shaped incision. As it was approached and separated, its nervous origin became evident, but it had spread anteriorly beneath the sterno-cleido muscle, also beneath the clavicle, apparently becoming continuous with the large amount of cicatricial tissue that had developed there since the last operation. It became imperative to cut the clavicle and dislodge each fragment outward and inward respectively. It was then possible to remove the malignant mass. The two brachial cords formed by the 5th, 6th, 7th and 8th cervical, and 1st dorsal nerves were severed, and the tumor then became movable so that it could be separated and removed. In doing this the internal jugular vein suffered an injury, venous hemorrhage became profuse but was easily controlled by a lateral catgut ligature. The subclavian vein was removed with the mass because of its amalgamation with it.

It is interesting here to note the loss of the subclavian artery and vein, and the brachial plexus of nerves. The arm is swollen, it is warm, color is bluish-red, motion and sensation are, of course, abolished, excepting the motion of raising the shoulder, which is controlled by the levator anguli scapulae innervated by the rhomboid nerve which comes off above where the plexus was severed.

These conditions are no worse since the last operation, showing that collateral circulation had been previously well established.

The proper procedure would have been intercosto-thoracic amputation, but the patient would not listen to it. It was feared that possibly the thoracic duct suffered injury, but this proved groundless. For a few days subsequent to the operation the patient could not speak above a whisper, and the respiration was at times somewhat difficult. This may all have been due to hysteria, though the left recurrent laryngeal nerve may have been included in the same ligature; this seems quite likely, because, as the ligature and other manipulations were executed in that region, respiration momentarily became impeded. Voice as well as normal respiration have now returned. The clavicle was united with bronze wire, and the large wound gradually contracted until it closed completely.

Consolidation of the lower lobe of the left lung developed about three weeks after the last operation, but resolution took place satisfactorily, in the course of several weeks One year later the carcinoma has recurred in the stump of the brachial plexus, close to the spinal column, in the arm and chest, making another removal impracticable.

UREA, ITS ESTIMATION AND IMPORTANCE.*

BY C. J. COMBS, M. D.,

OSHKOSH.

Urea is the most important nitrogenous constituent of the normal urine, containing as it does about 89 per cent. of the total nitrogen

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excreted, the other 11 per cent. being found in uric acid, etc. Although studied since 1773, there are still many questions regarding its formation and importance that cannot be answered definitely. The amount varies normally in direct proportion to the amount of nitrogen ingested, the amount of nitrogen excreted in the urine being practically the same as that ingested, and this constitutes the so-called nitrogen equilibrium. The quantity of urea is therefore somewhat variable, depending upon the proteid consumed. The amount excreted by the average person living upon a mixed diet is about 500 grams or 2 per cent., the per cent. varying with the bulk of the urine.

Urea is usually at its maximum about three hours after a meal. A small percentage of urea comes directly from the breaking up of the proteid in the intestinal canal when the amido acids, especially leucine, are formed, and as the products of proteid digestion are probably not taken up by the lacteals but by the portal circulation, they are conveyed to the liver and transformed into urea. But the proportion of urea formed in this way is comparatively small. That the liver is the organ where most of the urea is formed has been quite conclusively proven by the experiments of Nencki and others, but whether this is accomplished by the liver cells or simply takes place in the blood stream is a question still open for discussion. Some recent writers contend that certain substances secreted by the ductless glands, as the adrenals, are capable of producing these changes in the blood current of the liver, but as yet they have not produced any satisfactory evidence to prove the same. Both theories may be partially right as urea is certainly formed in other parts of the body than the liver, and it seems quite probable that the liver cells may have a selective power of forming urea from certain products of proteid metabolism, while the formation from others may take place in the blood stream.

Nencki brought the portal vein in direct communication with the inferior vena cava and then ligated the hepatic artery, which resulted in a great decrease in the amount of urea with a corresponding increase in the amount of ammonia salts.

In geese from which the liver has been removed, uric acid, which is the equivalent of urea, is greatly decreased, and urea fed to geese in this condition is excreted as such while in normal geese it is excreted as uric acid.

Further, the experiments of Schroeder show that if the liver is quickly removed and a solution of ammonia carbonate or ammonia lactate in blood or even in water be injected through the liver, urea is formed.

Clinically in conditions where the function of the liver is increased, as in diabetes, there is an increase in the amount of urea, while in acute yellow atrophy there is a marked decrease of urea with appearance of leucine and other substances that are supposed to be antecedents of urea.

These experimental and clinical facts show us two things: first, that the liver is the principal seat of urea formation, and secondly, that it is not the only place of formation, it being probably also formed in muscle, spleen, etc.

What the intermediate products are between proteid and urea is not yet fully determined, but as chemists have been able to produce urea from uric acid and creatin, they are naturally supposed to be antecedents in the body. It is also probable that glycocine and leucine are antecedents, for when introduced into the bowel or in the circulation, they are excreted as urea. Ammonium carbonate has been shown by the experiments of Schroeder to be one if not the principal substance from which urea is formed.

Muscular activity does not increase the amount of urea to any marked extent, which apparently proves that although the nitrogenous compounds make up the bulk of the body tissue, it is not from them that energy is obtained, but from the carbohydrates.

As the amount of urea keeps such a close relation with the amount of nitrogen ingested, the question naturally arises how this is brought about. As to this there are two principal explanations: one, that part of the proteid goes to repair the necessary nitrogenous waste of the body while the extra quantity in the blood stimulates the tissue to greater nitrogenous activity by the production of heat, etc., the antecedents of urea resulting; and the other, that the proteid material not required for necessary repair is split up in some part of the body into a nitrogenous and a non-nitrogenous substance, the non-nitrogenous substance being stored up as fat and the nitrogenous gotten rid of in the form of urea. The latter view seems the more probable because of the fact that less nitrogenous material is required by a person who has fat stored up, or taken in.

Numerous methods for the estimation of urea have been used which for scientific purposes are useful, but many of them are so tedious and require so much technical skill as to be of very little use for the practicing physician. The methods that would seem to be practical for clinical purposes are those depending upon the reaction taking place between sodium hypobromite and urea, the nitrogen freed being measured and from this the amount of urea is estimated. A detailed description is not necessary here.

There are a number of forms of apparatus used, those of Dupré and Gerard being useful. It is hardly necessary for clinical purposes to make corrections for temperature, barometric pressure and tension of aqueous vapor.

If one of the special forms of apparatus is not at hand, a very satisfactory one can be constituted from a couple of bottles, a burette, a couple of perforated stoppers, and some glass and rubber tubing. By the amount of water displaced by the nitrogen evolved when a given amount of urine is brought in contact with the hypobromite solution, the amount of urea can be estimated, as 0.1 gram of urea will produce 35.4 cc. of nitrogen, and from this the total amount of urea in a twenty-four hours' urine may be estimated. It is necessary that the hypobromite solution should be made fresh each time as it decomposes rapidly. It is made by mixing 2 cc. of bromine with 23 cc. of a 40 per cent. solution of caustic soda.

The criticism of this method is that the carbonic acid evolved vitiates the results and that there is a loss of part of the nitrogen, but as a matter of fact, the carbonic acid combines with the soda and the amount of nitrogen lost is not sufficient to cause any great error in clinical work. The Congress for Applied Chemistry a few years ago agreed that the hypobromite method was sufficiently accurate for clinical purposes.

Urea excretion is decreased in pathological conditions of the liver which decrease the activity of that organ, and in diseases of the kidney in which the power to excrete is injured, while in such a condition as diabetes there is a greater increase. It is in connection with conditions known as uremia and puerperal eclampsia that the estimation of urea is most often considered, and as these two conditions are apparently closely related, the consideration of one (eclampsia) alone will be taken up.

Urea was formerly supposed to be the toxic substance retained in these conditions. Later, however, many believed the toxic substances were of mineral origin, as potash, while others as Jaccoud attribute the condition wholly to creatin and replaced in his nomenclature the name creatinemia for uremia.

That urea, potass, creatin and certain unclassified extractives of the urine are capable of producing convulsions, coma, and the like, there can be no doubt, but that any one of these is the only cause cannot be so easily proven for many of them, as urea is not found in the blood of those suffering from these conditions in sufficient amounts to produce them.

We must then take the position of Bouchard, who concludes that there are many substances that produce this condition. In eclampsia, it is uncertain whether the poison comes from the mother or the fetal metabolism.

The importance of estimating the urea lies in the fact that the excretion of urea is an indication of the eliminative ability of the body for toxic substances.

Urea is of itself a stimulant to urinary secretion and if there is a diminution in the amount of urea thrown off, there would probably be a decrease in the excretion of other toxic substances. In the examination of the urine of pregnant women, there is a division in the profession as to the relative importance of the finding of albumen and casts, and the decrease in the amount of urea; those basing their judgment upon the excretion of urea generally look out for trouble when the urea falls below 1 per cent.

It is a well known clinical fact that certain cases of puerperal eclampsia occur where we do not find albumen or casts in the urine, and it is on account of these cases that an estimation of urea should be made. It is in such (more especially where the kidney seems to escape the action of the toxines producing eclampsia) that we find degenerative conditions of the liver, and it seems quite probable that eclampsia may be due not wholly to the inability of the kidney to excrete the toxic substances, but also to a lack of power of the liver to so change them as to admit of their excretion.

So we see that in those cases of pregnancy where we get our warning from the presence of albumen and casts, we would get it equally as well from estimating the urea, while in the cases occurring without signs of a kidney lesion and where the liver seems to be the organ that suffers, we would also get the warning from the decreased amount of urea.

In summing up, the estimation of urea is important:

First, in determining the nitrogenous waste, as in fevers.

Second, in judging of the activity of the liver by its ability to form urea, but first being sure of the ability of the kidney to excrete urea if formed.

Third, as a means of diagnosis of danger in pregnancy.

It must be remembered that we should know something of the amount of proteid ingested in all cases to make these estimates of value.

Discussion.

Dr. D. W. Harrington, Milwaukee: This is an important scientific paper and one that is worthy of discussion. I should like to call attention to the fact, that most of the work done in the way of estimating the quantity of urea eliminated in the urine is practically useless, because the amount of proteid in the food taken in is not considered. The amount of urea eliminated under ordinary conditions is directly in proportion to the amount of proteid in the food consumed. If we do not know how much nitrogenous food is ingested, we cannot know how much urea to expect, either in health or disease, and consequently, we cannot know whether there is an excess or a deficiency in the urine excreted. If we put a patient on a diet of, say, 1½ pints of milk, 6 eggs, 250 grams of white bread and 45 grams of butter, or any other diet containing a known quantity of proteid, and keep the patient on this diet for a few days until the output of urea has become regulated in accordance with the intake of proteid, we shall know whether a proper quantity of urea is excreted. This is the first and most important thing to consider in the quantitative estimation of urea.

If there is any value in the quantitative estimation of urea, it would seem to be much more important to estimate the amount of urea circulating in the blood than that excreted in the urine. It is well known that so-called uremia may occur in persons who excrete a normal quantity of urine, containing no albumin and showing little or no deficiency of urea. If uremia is due to an accumulation of urea in the blood, this accumulation may take place very gradually, while the daily excretion of urine would show only a trifling deficiency in the out-put of urea.

Formerly, when considering this subject, our minds were centered upon the kidneys. Recent investigations have taught us to think more of the organs of metabolism and especially of the liver, rather than of the kidneys. It is well known now that urea is formed chiefly in the liver, and that it is simply selected from the blood and excreted by the kidneys.. It is also known that the kidneys are competent to excrete much more urea than is normally excreted from the body, even on a maximum proteid diet. If one kidney be removed and a considerable portion of the other kidney, the remaining fragment is competent to excrete more urea than is normal. If urea be injected into the blood stream, even diseased kidneys are competent to excrete it in quantities much greater than the normal. It is only in those cases where the stress of the disease falls upon the tubules of the kidney, the parts whose function it is to excrete urea and other organic salts, and then only when they are very badly damaged, that the kidneys are incompetent to excrete a sufficient quantity of urea. This occurs chiefly in cases in which a severe acute nephritis is superimposed upon an old chronic nephritis and in which there is almost complete anuria.

In the majority of pathologic conditions associated with a deficiency of urea, we shall find that it is the organs of metabolism, and especially the liver, that are at fault. We may take as an example that hepato-toxemia that underlies puerperal eclampsia. It has been demonstrated at the Johns Hopkins Hospital that in all cases of gestation, as a rule, there is a deficiency in the amount of urea excreted, the average quantity being from 20 to 24 grams, instead of 34 grams, the diet being an average mixed diet. It has also been

determined that the most constant and characteristic pathologic lesion in puerperal eclampsia is the occurrence throughout the liver of small red and white infarcations of thrombotic origin. It seems quite certain that the toxemia is due, not to an excess of urea in the blood, but to some toxalbumin that the liver, because of its diseased condition, fails to neutralize or to convert into urea.

There is another subject to which I should like to call attention in this connection. MacAlister has demonstrated that in all cases of gout without exception there is a deficiency in the urea output, that there is a greater average deficiency in gout than in Bright's disease of the kidneys, and that this is true in all cases of gout, whether there is an associated nephritis or not. This is important as pointing to the liver and other organs of metabolism rather than to the kidneys. It is also important from a diagnostic standpoint, as it enables us to differentiate more clearly between chronic gout and so-called chronic rheumatism in which there is no deficiency of urea.

I wish to refer to one point in the paper that is very important and this brings up the old uric acid question. It was stated by the writer of the paper that uric acid is one of the products further metabolism of which normally produces urea. It is now generally understood that uric acid has no relation whatever to the production of urea in the human organism. In man, uric acid and urea belong to wholly different and clearly separated lines of metabolism. We have heard much about uric acid during the last ten years, and those who read the "Uric Acid Monthly" may be led to believe that uric acid is a very dangerous thing. It is now quite well established that uric acid is not poisonous to the body at all; that it is not, *per se*, the cause of any disease. The only harm that it is known to do is in the way of forming concretions. We have been taught that, when considerable uric acid is formed in the urine, one of the first things to do is to stop the ingestion of proteid food. Now uric acid does not come from the ordinary albuminous foods at all, and it has nothing whatever to do with ordinary proteid metabolism. This matter has been thoroughly worked out by Professor Chittenden, one of the foremost of physiologic chemists, as well as others. In the human organism uric acid has two sources. One part comes from the metabolism of the nucleo-proteid elements of the body cells; the other part comes from the metabolism of the same kind of elements of certain foods, such as the nuclei of the cells of green vegetables, meat extracts and soups, sweet-breads and other glands, the thein and caffein of tea and coffee, etc. This is an important practical question, because nothing whatever is gained by the ordinary routine restriction of proteid diet in the so-called uric acid diathesis or in the conditions termed lithemia. A maximum amount of egg-albumin, milk and cheese, or other ordinary proteid food, will not in any degree increase the amount of uric acid in the body; nor will an excess of uric acid or its antecedents in any degree increase the amount of urea in the body, or excreted from it in the urine.

THE SHADES OF MODERN SURGERY.

By JOHN HUND, M. D.

WAUSAU, WIS.

"Where there is light there is shade." This proverb is one of the most useful to keep in mind when we contemplate the examination and discussion of important questions in a critical and analytical way. It is the best guide which leads us on the highway of reason, between the giddy bluffs of optimism and the low swamps of pessimism, to a point where we can see through the perspective of sound and true scientific independence the field spread out before us. And when I apply this proverb to modern surgery and then speak of the shades only, I wish it to be distinctly understood that I do not stand or stick in the swamp of pessimism, whence I cannot see the light, and therefore maliciously deny or deride the great achievements reached by modern surgery, as you and the whole civilized world will gladly testify. Just because we know so much of the light or sunny side and so little of the shady side of modern surgery, I will ask your permission to make a few remarks on the latter.

One of my former professors had written in large letters on the blackboard: "Aseptic surgery has revolutionized military surgery. It has reduced the mortality many per cent." I will not deny any of the two assertions, but from my viewpoint I beg to say, that with due respect to the light in the shade of its rays, I read: Modern, especially aseptic surgery has demoralized general surgery. And as to the second assertion, I like to say that the claims for the reduction of mortality on the battlefield is a trespass on the rights and merits of other branches of medicine, and of some of their illustrious representatives. I will refer only to one person and one instance. The instance is the Crimean War (1854-1856), and the person is that angel in human form, Miss Florence Nightingale. Let history speak: "The English army lost, under Miss Florence Nightingale as chief of the medical staff, in this winter 1,551 soldiers, while the same army lost during the previous winter 10,283. She reduced the mortality in one winter from 22.23 per cent. to 2.21 per cent., while the French army lost in one winter 10,934, and in the following 21,162." I present you these accounts for your own reflection and consideration, and I am certain that you will agree with me in what I have said in regard to unjust claims and trespass when you remember that Sir Joseph Lister and his whole knighthood were at the time not yet in flower, and aseptic surgery was yet in its embryonic state.

But let us take up now my first counterclaim. I hope you will forgive me when I repeat the harsh assertion and that you will at this time take the unpleasant, unsugarcoated pill when I say: Modern surgery has in great measure demoralized surgery and our present practice in general—this in various ways. I will mention but a few.

1st. It has, as I have already said, set up false claims, thereby encroaching upon other fields and branches of medicine. 2nd. It has created a craze for specialties. 3rd. It has spread deception on all sides. 4th. It has separated the art from the science of surgery. 5th. It has developed greed and undue ambition, thereby lowering the moral standard of our profession in the eyes of the laity.

If we go to any of our medical centers, enter a hospital, college or medical institution of learning, what is the first impression we receive? Certainly that surgery is paramount, is king over all other branches of medicine. Everybody, the janitor of the college, the doorkeeper of the hospital, the freshman, the interne, everybody we meet, has a long string of hymns of praise for this, that or the other surgeon, constantly wound up to spring on us, at or without any provocation, while the professors of anatomy, physiology, materia medica and therapeutics and of all other branches, and even the most meritorious teacher of the principles and practice of medicine, are hardly known or mentioned. Moreover, it seems indeed as if the standing, reputation and fame of our medical leaders are measured by the number of laparotomies and similar operations performed. They, and they alone, seem to count as the scalps count for the fame of the Indian chieftain. This is a somewhat frivolous comparison but it certainly fits the case.

This deception regarding surgery is inflated in hundreds of students year after year and carried out in the general field of practice. And now take the young practitioner, filled up and saturated with these ideas of surgery, and let him begin the practice of medicine in a normal ordinary way, and the deception becomes at once apparent to him. In the first place he has no taste for common practice, and next feels that his enthusiasm for his surgical teachers has carried him away from the useful studies principally demanded of an ordinary practitioner. In fact he feels himself more fit to remove an ovarian tumor, to operate for appendicitis than to reduce a luxation of the elbow joint, or to set a greenstick fracture of the humerus; and then on goes the deception. *Mundus vult decepi, ergo decipiamus,* says he, and on he goes.

It it nearly 40 years since I witnessed, a mere boy, the amputation of the upper third of the femur on a railroad conductor, by the

only physician of my native town in Germany. The operation made such a deep impression upon me that I remember very clearly all the circumstances. There was no chloroform, and my uncle, a priest who yielded to my prayers to accompany him, held the patient firmly embraced. I assure you that I have never since seen a similar operation performed more cleverly, more dexterously and skillfully, than this first one of my remembrance. Yes, more than that, I have never seen its equal with perhaps a few exceptions, of which I have now in mind the great and venerable Moses Gunn, of Rush Medical College. This man (Dr. Schabel) also performed, in several emergency cases, the Cæsarian operation with success, and yet he would not dare to open the abdominal cavity under ordinary circumstances, but sent his patients to the University of Tübingen, or called Dr. Martini, renowned throughout my country as a surgeon. In those days a surgeon felt his responsibility and the seriousness of his task. A man could, or would only operate if he was absolutely master of the situation both in the science and the art of surgery. Modern surgery has changed all this. The operator may know the science of surgery or he may not know it, he may be a clever pathologist and a correct diagnostician or may not be. He may be a skillful operator and know every phase of his art, or he may be a bungler; if he observes strictly the rules of aseptic surgery he will have success as far as the immediate results are concerned. While we have a number of men who combine both qualities, we find thousands who are lacking either in the science or the art of surgery, *i. e.*, they are either poor diagnosticians or bunglers in their operations, and then of course we have so many who are lacking in both, and they too operate, cut and slash, open the abdominal or other cavities, hunt for tumors or other troubles, find nothing, close up the wound, look wise and charge well.

As an example or model of an ideal surgeon, I would like to mention the lamented elder Gross, of Philadelphia. His pen picture of a surgeon is the most beautiful and sublime I have ever seen, and should be recommended from a higher place to every one who intends ever to handle the surgeon's knife. Space or time does not permit a lengthy discussion on this point. As to the representatives of the two faculties of surgery, I would from my own recollections and limited experience say that Christian Fenger was the most profound and reliable in the first, *i. e.*, the science, and Moses Gunn of more ancient fame, the most accomplished operator I have seen, while Nicholas Senn has less of the former and less of the latter but sums up a higher average in both together.

Modern surgery has created a craze for specialties. It is a well

known historical fact that the specialists have always constituted a most abject and destructive element in the medical profession. Long before Hippocrates' times the so-called specialists lowered the standing of medicine to a *negotium sordidum* (mean trade) unworthy of a free born citizen of the Roman Empire and relegated almost exclusively to the domain of slavery. In Hippocrates' time (460-377 B. C.) the tenacious clique which ruined the medical profession during his grandfather's day, became once more aggressive and laid exclusive claims to certain operations; these otherwise useful operations fell into such disrepute, that Hippocrates forbade his disciples the performance of them, as—for instance—the extraction of stones in the bladder, and he demanded from all and every one of his pupils an oath never to perform this particular disreputable operation. In the beginning of the 16th century history repeated itself when the surgeons, in company with the clique of barbers, forced their recognition and admission into the faculty of medicine of the University of Paris. It seems now as if history were again repeating itself.

The darkest shade and the root of our evil, however, is greed. Has it not often appeared strange to you, that patient after patient, whom you had treated for some general ailment, should go to a certain operator of some medical center, should suffer a surgical disease of which you have been absolutely unaware, be operated upon, and if not dead, come back to you as the same old invalid? And again that another flock should turn in to another operator, to be operated upon for another trouble? Does it not seem as if certain hobbies have taken possession of certain surgeons, one gall stones, another appendicitis, another laceration of the cervix (this is somewhat shopworn)?

So much for the big fellows. Now a word or two as to our condition. None can expect of us, that we all should combine the two faculties of surgery to a perfect degree. But everybody can expect that we should be honest and not trust too much to the safeguards of modern surgery, but be led in all our undertakings by a sense of self-knowledge and fairness. If, for instance, we suspect a tumor but are not absolutely certain, we should delay an operation until the case is, either by self investigation or by counsel, presented to us in a clear and true light. No self-interest or personal consideration should interfere with our grave and serious duty. On the other hand if our diagnosis is established, but we have reason to fear conditions and complications, which might baffle our technical skill, we should gladly withdraw and devolve the responsibility upon other shoulders, turn the knife over to a man more efficient in the art of surgery. But, some one remarks, the practice of medicine is a struggle, has sunk down to a proletariat and hence we must reach and hold all we can. I answer, that this is a

sad confession but only establishes the truth of my primary assertion, that modern surgery mainly is the cause of this demoralization of surgery as well as general practice. Yes, indeed, it has to a very large extent verified the old adage, "Fools rush in where angels fear to tread."

Before I close I would like once more to hold up the solemn penpicture of the immortal Dr. Gross alluded to at the beginning of this paper, with the sincere wish that every surgeon, and more particularly every would-be surgeon, would hold it up to himself as a mirror or reflector before he undertakes a serious operation. Let me quote from memory. "No convict can feel much worse on the day of his execution, than I feel before a serious operation. The gravity of the case rests heavily upon my mind. I hear the bugle call of duty, sleep has fled and during a long and dreary night I sit up in bed or walk the floor in dreadful anticipation of the things to pass on the morrow. I see before me the suffering patient, say the faithful companion of a heretofore happy and prosperous husband, the tenderly loving mother of a number of sweet, helpless children. What will become of them? is the repeated question that confronts me, which way I may turn! Will the husband be a widower, the children waifs by to-morrow or soon after? And then comes the answer which makes my heart tremble: 'God alone knows—but a great deal depends upon you, your skill and ability.'" Dr. Gross then continues by describing the scene which presents itself the following day, the day of this operation. He speaks of the awful solemnity which embraces all participants. He refers sympathetically to the fear of his patient, the anxiety of the family and their friends, and once more portrays his emotion emanating from a noble character when he says, "Now all is ready for the operation; just as I want to proceed I am called to an adjacent room, where the husband, careworn and pale, looks deeply into my eyes, asking in silence many grave questions. I answer with a firm shaking of his hand. He answers with the grasp of a drowning man and whispers with an effort, 'Oh, Doctor, please save her.'"

Dr. Gross goes on describing the operation and then the worry following and concludes thus: "Have I overdrawn? I have not, for I sat hundreds of times to this picture." Now, I ask, what picture may be drawn of the majority of surgeons of this day? I would hesitate to draw one. But let him, who does, refrain from drawing a sacred shrine accessible only to the ordained high priests of the divine art and their chosen disciples, but let him rather draw an amphitheatre with a grand stand and a brass band—a free for all race! Such is our time, such the shades of modern surgery.

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EDITORIAL COMMENT.

ATTENTION!

There is now before the Legislature amended bill No. 237 S., which is of immediate interest to every physician. It is a bill giving the State Board of Medical Examiners the power to revoke licenses granted when fraud was concerned in obtaining them, and to revoke licenses after trial and conviction of persons guilty of grossly immoral, dishonorable and unprofessional conduct, and to eliminate the newspaper advertisements relating to venereal diseases, 'lost manhood,' criminal abortion, and such advertisements as are a palpable fraud upon the public—in other words, quack medical advertisements.

The public press as well as all the advertising quacks and mounte-

banks in the state are in active opposition—for obvious reasons. At the several hearings before the Senate Committee the chief opposition to the bill was because of its alleged unconstitutionality. The merit of the bill is admitted. Ex-District Attorney Wm. H. Bennett of Milwaukee, retained as counsel by the committee on medical legislation of the State and Milwaukee County Medical Societies, conclusively established in an able argument that laws giving power to State Boards of Medical Examiners to revoke licenses, are not only existent in a number of states (Minnesota, Rhode Island, Iowa, California, Michigan and others) but that the courts in those states have held such laws to be constitutional, and that, furthermore, the United States Supreme Court has also held that such laws are not in violation of the United States Constitution. The Supreme Court of Wisconsin has upheld our present medical law so far as it has gone, as in the case of State e. r. Kellogg vs. Currens (decided in 1902).

The bill being endorsed by the State Board of Medical Examiners and the committee on Medical Legislation of the State Medical Society, and being highly desirable from every professional point of view, it remains for the profession of the state to exert its strength for its enactment.

THE TIME IS RIPE FOR ACTION, AND THIS ACTION MUST BE UNANIMOUS AND IMMEDIATE TO BE EFFECTIVE. EVERY PHYSICIAN IN THE STATE SHOULD AT ONCE COMMUNICATE WITH THE SENATOR AND ASSEMBLYMAN FROM HIS DISTRICT AND URGE THEIR SUPPORT OF AMENDED BILL NO. 237 S. DO THIS AT ONCE BY LETTER, TELEGRAPH, TELEPHONE OR PERSONAL INTERVIEW. LET US DEMONSTRATE THAT OUR ORGANIZATION IS NOT ORGANIZATION IN NAME ONLY, BUT A REAL, LIVING TRUTH. THIS IS ONE OF THE MOST VITAL MEDICAL QUESTIONS THAT WILL EVER COME UP FOR CONSIDERATION IN THE LEGISLATURE, AND IT MEANS MUCH TO THE PROFESSION OF THIS STATE.

THIS BILL MUST PASS.

BILLS NOW BEFORE THE LEGISLATURE AFFECTING THE PRACTICE OF MEDICINE IN WISCONSIN.

At no time in the history of Wisconsin has the state had a more efficient and intelligent body of men to guide its affairs than that which constitutes the legislature at this time. Capable and willing to give their time and consideration to any law relative to improve-

ment, both in medical and general matters, they have shown almost an eagerness to listen to arguments for and against the bills relating to medicine introduced into the legislature this year.

Five bills of interest to medical men were introduced. Probably the most important is that known as No. 237 S. or No. 353 A. which gives the Board of Medical Examiners the power to revoke the license of any physician guilty of immoral, dishonorable or unprofessional conduct, and distinctly defines the terms "unprofessional or dishonorable conduct." This bill has been referred to the Committee on State Affairs of which Senator Munson is chairman. It is meeting with the organized opposition of the press of the state because it forbids a physician from "advertising in any newspaper, pamphlet or other written or printed paper or document, the curing of venereal diseases, the restoration of 'lost manhood,' or of any medicine, or any means whereby the monthly periods of women can be regulated or the menses re-established, if suppressed, or being employed by or in the service of any person, firm, or corporation so advertising."

Bills of similar import have been passed by the legislatures of Indiana, Iowa, Kentucky, Michigan, New Mexico, Tennessee and California within the last few years, and Wisconsin should join their ranks in putting a stop to the practice of flaunting before the eyes of the public nefarious, obscene and criminal advertisements with the inevitable result of moral degeneracy in some and blunting of the moral sense in others, and above all must we limit the introduction into our homes of a class of literature which no self-respecting parent would or should permit for the perusal of his children.

No. 244 S. or 419 A. is a bill covering the same ground as the above, being offered as an amendment to the existing law. This bill will come up for consideration upon the disposal of No. 237 S. or 353 A.

Bill No. 591 A. introduced by the State Board of Medical Examiners has been withdrawn in favor of 237 S.

Bill No. 155 A. is one aimed directly at the practice of inducing abortions.

The fifth bill is a substitute bill to 154 A., introduced by Senator Rummel at the instigation of the Committee on Health and Legislation of the Medical Society of Milwaukee County, and proposes to place the institutions for the relief of the county sick and poor under the direction of a board of trustees. The government of such institutions by Boards of Supervisors has proven unsatisfactory, and wherever these have been placed into the hands of trustees marked improvement has been shown. As it now reads the bill provides for a

board of five trustees, one each for terms of one, two, three, four, and five years. Thereafter, when the term of office of any trustee shall expire, his successor shall be appointed for a term of five years. The trustees are to be elected by the Board of Supervisors.

Collectively these bills represent a great step toward the improvement of the relations of medical practice to the public. As is usually the case the people must be protected against themselves. This is especially true in what to them is the mystic science of medicine, and in these bills the root of the evil is reached in that the people are assured the counsel of good, safe men.

THE FIFTY-NINTH ANNUAL MEETING OF THE STATE MEDICAL SOCIETY.

The time is now rapidly approaching for the next annual meeting of the State Medical Society, and in this connection the attention of its members is called to the announcement of the program committee to be found in this issue of the JOURNAL. It has long been thought that the greatest good to the greatest number can be effected by providing a limited number of papers and making an effort to secure as full and free discussion of the same as possible. It has seemed that the meetings held the last two or three years have tended very strongly to support this opinion, and the committee this year is evidently working along the same lines.

There is, however, in the make up of the human animal, especially the medical animal, a strong tendency to put off until the afternoon of the last day the completion of papers in preparation for medical meetings, and this has been one of the greatest hindrances to success in the matter of securing adequate discussion. It is to be hoped that the writers of papers this year will prove exceptions to the above rule and complete their papers, as requested by the committee, by May 1st, and see to it that copies are in the hands of the men who are to discuss them by that date.

La Crosse is a most desirable place in which to hold a medical meeting; the proximity of the "Father of Waters," it is understood, is to be utilized by the local committee, and one of the features of the meeting will be a steam-boat excursion up the river and a supper on the boat.

The coming meeting will be the first since the full reorganization of the profession in Wisconsin, and it ought to be characterized by a larger attendance than ever before, and it is expected that such will be the case.

The scientific value of the work done in the State Medical So-

ciety has been greater and greater each year and is bound to improve in the future. for the rank and file of medical practitioners in this state at this time has enjoyed educational advantages—both preliminary and medical—far above those within the reach of their predecessors. The state is supplied with hospitals as never before, and these are the modern practitioner's clinical laboratories.

PHARMACEUTICAL CENSORSHIP.

The "Council on Pharmacy and Chemistry," of the American Medical Association, which is composed of some of the best known chemists and pharmacologists of this country, is about to make an effort to solve the vexed problem of separating the wheat from the chaff among the many non-official pharmaceutical preparations placed upon the market. A circular letter has been addressed to the manufacturers requesting them to submit their preparations to this Council. Only those manufacturers who conform, when submitting their products, to the rules laid down by the Council, will be given consideration. The preparations are to be critically examined as to their ingredients, and their therapeutic virtues, and those approved by this body will be incorporated in the book, "New and Non-official Remedies" to be issued by the A. M. A. The Council's action will also provide a consistent standard which will determine the status of the advertising pages of the *Journal of the A. M. A.*

The *Journal of the A. M. A.* has been so frequently criticized for the character of its advertisements, that the management will doubtless feel the relief of having the burden of selection or rejection carried by others. The plan outlined by this Council will doubtless prove of very great service to the entire profession.

COMPULSORY VACCINATION.

The Supreme Court of the United States has recently rendered a decision of very far reaching significance, and one that will lend great encouragement in the work of public sanitation. In the state of Massachusetts the law has for a number of years provided that during the prevalence of smallpox the local authorities could order vaccination. In the winter of 1902 smallpox was prevalent in Cambridge and the Board of Health of the city ordered vaccination under the provision of the law. One Henning Jacobsen declined to be vaccinated on the ground that his personal liberty was involved. The case was tried in the Massachusetts courts, which decided against the

claims of Jacobsen. The case was appealed to the Supreme Court of the United States, and the following decision was rendered, the opinion being given by Justice Harlan, two of the nine justices dissenting:

"We assume for the purpose of the present inquiry that adults not under guardianship and remaining within the limits of the city of Cambridge must submit to the regulations of the board of health. On any other basis, organized society could not exist with safety to its members. Society based on the rule that each one is a law unto himself would soon be confronted with anarchy and disorder. Real liberty for all could not exist under the operation of a principle which recognizes the right of each individual person to use his own will in respect to his person or his property, regardless of the injury that may be done to others. It is the acknowledged power of a local community to protect itself against an epidemic threatening the safety of all and to exercise that right in particular circumstances and in reference to particular persons.

"It was the duty of the authorities to keep in view the welfare, comfort and safety of the many and not permit the interests of the many to be subordinated to the wishes or conveniences of a few. Accepting the state court's construction of the statutes, we decide only that the statute covers the present case, and that nothing clearly appears that would justify this court in holding it to be unconstitutional and inoperative in its application to the plaintiff in error."

In these days when so much is often made of personal liberty which the constitution was never intended to contain, even under the most liberal interpretation, it is a source of gratification to have a decision from our highest court that can hardly fail to be influential in the determination of many cases in which this question is involved.

THE EVENING MEDICAL SCHOOL.

The Wisconsin State Board of Medical Examiners has put itself on record by refusing to recognize the diploma of the Harvey Medical School of Chicago. This is in opposition to the Illinois State Board of Health, which, though it stamped its disapproval of this institution in 1893, reversed this decision two years later. Whatever may have been the considerations that determined the Illinois board's favorable action, no one can misinterpret the motive of the Wisconsin board—a motive purely of disinterested concern for a standard of qualification that would be sponsor for a certain degree of efficiency.

A most interesting discussion *in re* the "Evening Medical School" took place recently at a meeting of the Physician's Club of Chicago.

Representatives of the Dearborn, Harvey and Jenner Medical Colleges were present to break lances with members of the faculties of the day schools. The arguments of the supporters of the night schools were, in general, rather wide of the mark, and contained references such as of the railsplitter who became president of the United States. Comparison was also drawn with evening law schools. This latter is manifestly unfair as most students of these schools devote their day hours to duties in law offices. Nor, as was claimed, do the night medical schools bear a resemblance to the university extension lectures, for these are essentially post-graduate courses in one or two branches of study, and it is quite reasonable to suppose that a person could master a fair acquaintance with these by attendance upon lectures and close application to work in leisure hours.

One of the speakers characterized his views in the following terse language: "The gentlemen who speak of the constitutional rights we have to get an education at any time during the twenty-four hours forgets that the public also has rights that must be respected. Is it right and proper to juggle with the good nature of our unsuspecting neighbors and compel them to accept a mere substitute and an adulteration? We prosecute the substituting pharmacist, but we tolerate and protect in our own ranks the manufacturer of an inferior grade of doctor. Nobody can tell me that a man can go into a medical school and make good use of the course without preliminary training, and without devoting his days and nights to the study of the difficult problems confronting the practitioner of medicine."

We must heartily agree with those who maintain the stand that one who labors with mind and body during the day hours to earn a competency, can hardly possess sufficient energy and nerve force to qualify him for the many exactions of a course of medical study that must be indulged in after sundown. And were it possible, then no term of study short of six years could, under even the most favorable circumstances, qualify him for the practice of this profession.

WORK VS. REST CURE.

In an admirably conceived article under the title "The Systematic Use of Work as a Remedy in Neurasthenia and Allied Conditions" (*Boston Medical and Surgical Journal,* Jan. 12, 1905) Dr. Herbert J. Hall of Marblehead, Mass., treats of that symptom-complex "neurasthenia" and suggests a well systematized and well thought-out plan which is ingenious and novel and on its face very rational.

It is conceded that neurasthenics lead very faulty lives, and chief among these is the factor of worry; and closely upon this follow fatigue and exhaustion. Overwork may also be a cause, but only if associated with undue worry.

Basing his reasoning on the assumption that the things a patient likes to do are, as a rule, less apt to produce fatigue than those activities which are distasteful, and also that neurasthenia is due to faulty living, Dr. Hall has attempted, by giving the patient an occupation that might be found agreeable, at the same time not courting physical fatigue, to help the neurasthenic escape his irritable self, forget the symptoms begotten of abnormal thoughts and imaginings and nourished in idleness, and force upon him a consciousness of his true worth and talent, and this without any self deception.

The author has founded as a sanitarium a School of Handicraft, where are taught the manufacture of pottery, and the weaving of cloth and baskets. Patients are not at once put to fatiguing work, but are allowed certain hours of rest, and gradually increasing hours of work. The charm of an occupation that is agreeable and the pleasure of fashioning beautiful things, and the added satisfaction of a realization of gradual improvement, are decided factors in the good results achieved. "The one great end to be obtained is self-forgetfulness and a pride and satisfaction in work and life."

The treatment here briefly outlined must appeal to all as rational and of practical merit. It is unquestionably a fact that idleness breeds ennui, and ennui breeds a dangerous incapacity to think and do normally, and this reflects upon the mental as well as physical health. Faulty living breeds psychic unrest, and these factors, when put together, will easily fashion a neurasthenic.

Whereas in many cases work will be conceded of great merit as a therapeutic means in this class of patients, doubtless in many—and often even in those in whom the element of fatigue enters as a strong factor—the diversion of outdoor exercise will yield brilliant results. Outdoor sports, such as golfing and tennis, mountaineering, roughing it in camp life, farming, etc., all in graded doses—these are means of overcoming the restless, self-centered lives of many neurasthenics,

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DETENTION HOSPITAL FOR MILWAUKEE.

The establishment of a Detention Hospital for the city of Milwaukee may now be considered an accomplished fact, inasmuch as money has been set aside by the city council, and the expenditure approved by the comptroller, for fitting up the unoccupied third floor

of the Johnston Emergency Hospital to provide the necessary quarters, and the county board of supervisors has agreed that on the presentation of an estimate for the running expenses, the required appropriation will be made.

The attainment of the above result whereby sufferers from brain troubles escape being thrown into the county jail or the police station as heretofore, pending the further disposition of the case, represents a vast deal of effort on the part of the medical profession of the city and the co-operation by public officials who appreciated the evils of treating sick people as if they were malefactors.

Some years since the ball was set rolling and in a measure the way was prepared for what has finally been accomplished. Dr. W. F. Becker at that time warmly interested himself in the movement and was also a member of the committee appointed last Spring from the County Medical Society (Dr. Richard Dewey, Dr. J. M. White, Dr. H. E. Bradley, Dr. W. F. Beutler, and Dr. W. F. Becker) which pushed the ball along until "action" was secured. The interest of Mayor Rose was enlisted and he recommended "action" to the council at his last inauguration. There the matter seemed to hang fire for a time. The committee, however, were not idle and recently Alderman Bogk arranged a joint meeting of city and county boards at which the committee were heard. Judge Carpenter also appeared and stated that the county was legally liable for the expense of custody, and it was finally agreed that the city would expend the money necessary to prepare the quarters for occupation in the Emergency Hospital and the county would appropriate the needed money for the additional expense.

It is to be expected that eventually, with the inevitable growth of Milwaukee, the detention hospital will be an independent establishment and that arrangements will be made, as has been done in other cities, for the clinical teaching of psychiatry—a branch which it is now recognized has suffered great neglect in all our medical schools.

ITEMS OF INTEREST.

Dr. Albert B. Prescott, the oldest professor at the University of Michigan, and one of the most noted chemists in the United States, is dead. Dr. Prescott was born in Hastings, N. Y., December 12, 1832, and was educated in the University of Michigan. He was made an honorary member of the British Pharmaceutical Conference in 1901.

"Doctor" Chas. Maessel, of Milwaukee, has been convicted of practicing medicine without a license. He was sentenced to pay a fine of seventy-five dollars, in default of which a confinement of three months in the house of correction awaits him.

State Board of Health Appointments.—Drs. Hasso A. Meilike of Clintonville, and Wm. H. Whyte of Watertown, have been appointed members of the State Board of Health for the terms ending February, 1910 and February, 1911, respectively.

Anti-vaccination bill vetoed.—Gov. Pardee of California has vetoed the bill to prevent vaccination being made a condition of admission to the public schools.

The Anti-Spitting Ordinance has after numerous failures been successfully passed in Milwaukee. No convictions have as yet resulted.

Dr. Hugh Russell, of Superior, Wis., aged 79, veteran of the Civil War, died March 8th of heart disease.

Dr. William Meyer, of Milwaukee. died on March 14, of Bright's disease. He was graduated at Rush Medical College in 1879, practiced at Hortonville for two years, and then removed to Milwaukee, where he enjoyed a very large practice. He was born in 1856.

Dr. Emory Lamphear, of St. Louis, for many years editor of *American Surgery and Gynecology*, has disposed of his interest in this journal to Dr. J. MacDonald, of New York, late manager of the *International Journal of Surgery.*

Liquozone.—The North Dakota Agricultural College (Government Experimental Station) publishes a bulletin containing the analysis of nine chemists in various cities, of the product put on the market under the name Liquozone, by the Liquid Ozone Co., of Chicago. The "remedy" is a cure all, a purifier of water, a sterilizer of milk, etc., and a forfeit of $1,000 is promised "the physician or scientist who discovers a disease germ which liquozone will not kill." That there is little danger of such forfeiture is shown by the fact that several specimens analyzed demonstrate that the "remedy" is an aqueous solution having a total acidity varying from 1.34 to 1.73 per cent., all but a fraction of which is in the shape of sulfurous and sulfuric acid. Needless to say, there is no free oxygen or ozone in the preparation.

Cerebrospinal Meningitis Epidemic.—The advisory board of the health department of New York City adopted a resolution empowering Dr. Darlington to ask the board for an estimate of funds for a commission to investigate cerebrospinal meningitis. The health department has been unable to check the spread of the disease. Five years ago it was hardly to be found in New York City. In 1903 there were but 271 fatal cases, while in 1904 there were 1,211. In January, 1904, there were but 25 deaths from the disease, while in January, 1905, there were 167. In February, 1904, there were 26 deaths, while in February, 1905, there were 149. In some parts of the city the disease has become almost an epidemic.

THE STATE MEDICAL SOCIETY OF WISCONSIN.

ORGANIZED 1841.

Officers for 1904-1905.

C. W. OVIATT, Oshkosh, President.

J. A. L. BRADFIELD, La Crosse, 1st Vice-President.

GILBERT E. SEAMAN, Milwaukee, 2nd Vice-President.

A. B. ROSENBERRY, Arbor Vitae, 3rd Vice-President.

CHAS. S. SHELDON, Madison, Secretary.

S. S. HALL, Ripon, Treasurer.

A. T. HOLBROOK, Milwaukee, Assistant Secretary.

Councilors.

FOR ONE YEAR.

1st Dist. H. B. Sears, - - Beaver Dam
2nd Dist., J. G. Meachem, - - Racine

FOR TWO YEARS.

3rd Dist., F. T. Nye, - - - Beloit
4th Dist., E. S. Hooper, - - Darlington

FOR THREE YEARS.

5th Dist., J. F. Pritchard, - - Manitowoc
6th Dist., J. S. Walbridge, - - Berlin

FOR FOUR YEARS.

7th Dist., W. T. Sarles, - - - Sparta
8th Dist., T. J. Redelings. - - Marinette

FOR FIVE YEARS.

9th Dist., D. L. Sauerhering, - Wausau
10th Dist., E. L. Boothby, - - Hammond

FOR SIX YEARS.

11th Dist., J. M. Dodd, - - Ashland
12th Dist., A. T. Holbrook, - - Milwaukee

Next Annual Session, La Crosse, June 8, 9 and 10, 1905.

The Wisconsin Medical Journal, Official Organ.

COUNTY SOCIETY DUES ARE NOW PAYABLE.

DO NOT FORFEIT YOUR STATE SOCIETY MEMBERSHIP.

SOCIETY PROCEEDINGS.

ANNOUNCEMENT.

The JOURNAL has been requested by Dr. Edward Evans of La Crosse, Chairman Committee of Arrangements, to announce a change in the date of the coming meeting of the State Medical Society. This is necessitated by a conflict of dates with those of another convention that meets in the same city. The meeting of the State Medical Society will, therefore, be held—not as heretofore announced, on June 7, 8 and 9, but on JUNE 8, 9 AND 10.

ANNOUNCEMENT OF THE PROGRAM COMMITTEE.

The Program Committee desire to announce that they have secured thus far, fifteen papers for the La Crosse meeting in addition to the three addresses. Dr. Hugh H. Young, Professor of Genito-Urinary Surgery in the Johns Hopkins University Medical School,

will deliver the Address on Surgery, and Prof. Victor C. Vaughan of the University of Michigan will deliver the Address on Medicine. The Committee have received the titles of most of the papers and take this opportunity to impress upon those who have promised papers the necessity of completing the same on or before May first, and also the prime importance of arranging at once for the proper discussions of their papers. It is the desire of the Committee that each writer of a paper secure at least two members to open the discussion on his paper. In order that the discussions may be full, free, and of the best quality, it is absolutely essential that the men who are to open the discussions should have a copy of the papers they are to discuss as early as May first. It is important, likewise, that each writer of a paper insist upon it that the men who promise to take part in the discussions, as above, should be present at the meeting without fail.

W. H. WASHBURN, *Chairman.*

SHALL WE HOLD OUR OWN?

Before the publication of the April number of the JOURNAL, the annual report from each of the 62 county medical societies of the State should be in the hands of the State Secretary, because Sec. 13 of Chap. IX. of the by-laws of the State Society provides that "the Secretary of each component society shall forward its assessment, together with its roster of officers and members, list of delegates, and list of non-affiliated physicians of the County, to the Secretary of the State Society between the 1st and 10th of April of each year."—And Section 14 provides that "any County Society which fails to pay its assessment or make the report required, on or before April 15th, shall be held suspended, and none of its members or delegates shall be permitted to participate in any of the business or proceedings of the Society, or of the House of Delegates until such requirements have been met." These provisions are plain and easily understood. We have voluntarily adopted this Constitution for our guidance and for the conduct of the affairs of the Society. As law-abiding members of of the Society we will all work together—officers and members—to the end that these provisions shall be carried out to the letter. Under our present plan the State Society is made up of the membership of the component County Societies and there is no other State Society. It's fate then is absolutely in the hands of the County Societies. Upon their efficiency and activity everything is staked. It may be well to repeat that this year is a crucial period in our re-organization movement. Shall we hold fast all the old members and gain many new

ones, or shall we permit a reaction from our enthusiasm of last year to result in a lessening of our membership and a weakening of our organization? Such an outcome would be a genuine calamity and it does not seem possible. *It must not be.*

The states about us are forging ahead in this movement and Wisconsin has never played the laggard. This plan of medical organization, embracing all the reputable physicians of the whole country, has in it too much of promise of good, in all directions, to allow us to fail in our part of the program. Independent of considerations affecting the profession as a whole, the motive of self-interest alone would seem sufficient to lead every reputable physician to seek membership in his county society. The advantages of such a connection should require no argument. While, in a short time, it will be the only means of securing membership in any other medical society whatever, there would seem to be no surer way in which to cut one'sself off from all fellowship with the members of his chosen profession. But in many cases these facts, and the essentials of the situation, are but partially known or appreciated. They must be brought home to such by patient and persistent personal effort, and this must be done mainly through the agency of the officers of the County Society, and especially the *Secretary.* Our failure or success will depend largely upon the activity and enthusiasm of this most important official. From now till the time of our Annual Meeting in June these 62 gentlemen (and ladies) will be the objects of intense interest and solicitude as to the account they will then give of their stewardship. I feel entire confidence that they will not be found wanting and shall be greatly disappointed if, in most of the counties, we do not have a material increase over last year's membership. It is not fair, however, to put *all* the work on the shoulders of the County Secretary. We are all equally interested and responsible. Each member can do much, not only by responding promptly with his own assessment, but also in doing missionary work in his own locality.

For the benefit of the new secretaries, it may be well to mention some of the specific requirements of the office. First, as to the dues to the State Society. This year there is no confusion or discrimination. It is $2.00 from one and all. This pays the dues from Jan. 1st, 1905 to December 31st, and entitles the members to the WISCONSIN MEDICAL JOURNAL for one year. *The money must be sent in every case with the membership roll,* or with the names, and without it no name will be entered on the books as a member of the State Society. Likewise all old members who have not paid by April 15th will be dropped from the roll and will not be eligible to the A. M. A. It is

the earnest hope that this matter of collecting dues is already in a fair way to completion. If not, *lose no time*, but set about the business with an urgency which shall compensate for previous neglect.

In making out the membership roll secure the names of *every* physician in the county, both members and non-members, and be just as particular in filling in the data of graduation and registration of the *non*-members as of the members. This information, if not furnished by the physician, can usually be found in the office of the County Clerk. Make careful note of all deaths and removals which have occurred in the County during the year. And be sure to insert not only the name of the delegate but also of the alternate delegate to the State Society. If the election of the delegates has been overlooked at the last meeting of the Society the president may properly make the appointments.

Secure the personal record of all who have not already furnished them, and make your card-index a complete and correct record of the profession of the county to date.

Finally—do not cease from your labors till every good man in your county has been brought into the fold. This means *much* self-denying work, but it is *work which pays* in the end.

The State Society Meeting is at La Crosse, June 7 to 9. It is *your* meeting and you are responsible for its success. Begin at once to make your plans to attend. Plan also to take your wife and to have a good time; this you will *have*—if you go, whether you plan it or not, since the local committee has made full provision for that matter—including with other social features—a boat ride on the Father of Waters.

Neither can you afford to miss the scientific part of the meeting. The addresses in Medicine and Surgery will be by two of the very best men in the country and the whole program will be on the very highest plane. *Keep the meeting in mind.*

The meeting of the A. M. A. will be held at Portland, Oregon, July 11 to 14. This will be a notable meeting and all should go who can possibly do so. The opportunity to visit the coast at a small expense will attract many and the meeting is sure to be well attended. Excursion trains are already being made up, and while we have received invitations to join forces with some of the other State Societies, a majority seem to think it most feasible to go on one of the trains made up at Chicago. Full details will be given in later issues of the JOURNAL, but meanwhile—in order to ascertain the possible number going from Wisconsin—all who are planning to go will please send their names at once to the State Secretary at Madison. (C. S. S.)

DIRECTORY OF COUNTY SOCIETIES.

COUNTY.	PRESIDENT.	SECRETARY.
Ashland	W. T. Rinehart, Ashland.	N. N. Glim, Ashland.
Barron-Gates-Polk	Gentz Perry, Amery	I. G. Babcock, Cumberl'd.
Bayfield	H. G. Lampson, Washb'n	T. B. Hicks, Washburn
Brown	D. H. Gregory, De Pere.	A. V. de Neven, Gr'n B'y
Buffalo-Pepin	M. B. Axtell, Pepin	P. B. Amunson, Mondovi.
Calumet	J. E. Luce, Chilton	G.P.McKenney, Stkbridge
Chippewa	C. A. Hayes, Chipp.Falls.	J.N.Cunningham, Stanley.
Clark	D. R. Freeman, Colby	V. M. French, Neillsville.
Columbia	B. C. Meacher, Portage	A. W. Jones, Randolph.
Crawford	W.T.Pinkerton.Pr'ie du C	J. G. Hoffman, P. du C'n.
Dane	C. A. Harper, Madison	R. H. Jackson, Madison.
Dodge	E. M. McDonald, B. Dam	H. B. Sears, Beaver Dam.
Door	H.R.Simon, Sturgeon Bay	G.R.Egeland, Sturg'n By.
Douglas	George Saunders	W. W. Pretts, Superior.
Dunn	L. A. Larson, Colfax	B. J. Steves, Menomonie.
Eau Claire	J.V.R.Lyman,Eau Claire.	H. A. Fulton, Eau Claire.
Fond du Lac	J.H.McNeil, Fond du Lac.	Flora A.Reed,FondduLac.
Forest-Florence	C. A. Decher, Crandon	S. M. B. Smith, Crandon.
Grant	L.G. Armstrong, Boscobel	M.B. Glasier, Blooming'n.
Green	T. W. Nuzum, Brodhead.	W. B. Monroe, Monroe.
Green Lake	C. E. Thayer, Markesan.	B. E. Scott, Berlin.
Iowa	W. J. Pearce, Dodgeville.	S. P. Deahofe,Mineral Pt.
Iron	J.H.Urquhart, Iron Belt.	T. J. Hambley, Hurley.
Jefferson	Wm. W. Reed, Jefferson.	Carl Feld, Watertown.
Juneau	J. B. Edwards, Mauston.	A. T. Gregory, Elroy.
Kenosha	G. Windesheim, Kenosha	F. E. Andre, Kenosha.
Kewaunee	R. H. Rice, Kewaunee	W. Wochos, Kewaunee.
La Crosse	F. C. Suitor, La Crosse	C.H.Marquardt,La Crosse
Lafayette	C. C. Gratiot, Shullsburg.	C.Lehnkering, Darlington
Langlade	I. D. Steffen, Antigo	F. V. Watson, Antigo.
Lincoln	Jos. Farber, Merrill	L. B. Collier, Merrill.
Manitowoc	Louis Falge, Reedsville	J. E. Meany, Manitowoc.
Marathon	D. La Count, Wausau	H. L. Rosenberry,Wausau
Marinette	T.J.Redelings, Marinette.	A. T. Nadeau, Marinette.
Marquette	W.J.Thompson, Briggsv'l	W. O. Dyer, Westfield.
Milwaukee	J. W. Coon, Milwaukee	A. W. Gray, Milwaukee.
Monroe	G. R. Vincent, Tomah	C. M. Beebe, Sparta.
Oconto	C. W. Stoelting, Oconto.	H.F.Ohswaldt,OcontoFalls
Oneida	C.D.Packard, Rhinel'der.	S. R. Stone, Rhinelander.
Outagamie	J. T. Reeve, Appleton	M.J. Sandborn, Appleton.
Ozaukee	E. E. Couch, Pt. Wash	Thos.A.Berwick,Saukville
Pierce	Henry C. Cotton, Presc'tt	D. C. Munger, Ellsworth.
Portage	Galen Rood, Stevens Pt	C.v.Neupert,Jr.,Stev's Pt.
Price	W. P. Sperry, Phillips	A. D. Gibson, Park Falls.
Racine	W. S. Haven, Racine	C. F. Browne, Racine.
Richland	R.H.DeLap, Richland Cr.	M. W. Haskell, Richl'd C.
Rock	S. B. Buckmaster, Jans'le	G. W. Fifield, Janesville.
Sauk	Chas. Gorst, Baraboo	Roger Cahoon, Baraboo.
Shawano	W.H.Cantwell, Shawano.	H. W. Partlow, Shawano.
Sheboygan	O. J. Gutsch, Sheboygan.	H. C. Reich, Sheboygan.
St. Croix	E.L.Boothby, Hammond	L. P. Mayer, Hudson.
Taylor	E. LeSage, Medford	J. H. Francis, Medford.
Trempealeau-Jackson	G. N. Hidershide, Arc'dia	Henry A. Jegi, Galesville.
Vernon	J. K. Schreiner, Westby.	C.H.Trowbridge, Viroqua
Vilas	A. B. Rosenberry, Ar. Vit	W. J. Pinkerton, Eagle R.
Walworth	Edward Kinne, Elkhorn.	M. V. Dewire, Sharon.
Washb'n-Sawy'r-Burn'tt	J. P. Cox, Spooner	E. R. Hering, Shell Lake.
Washington	D. W. Lynch, West Bend	W. J. Wehle, West Bend.
Waukesha	H. G. B. Nixon, Hartland	Mayb'le M. Park, W'ksha
Waupaca	L. H. Pelton, Waupaca	J. F. Corbett,Weyauwega.
Winnebago	G. M. Steele, Oshkosh	S. B. Acklev, Oshkosh.
Wood	O. T. Hougen, G'd Rapids	F. Pomainville, G'd. R'ds.

DUNN COUNTY MEDICAL SOCIETY.

A special meeting of the Dunn County Medical Society was held at Menomonie, February 16, 1905. A paper on *Asepsis and Antisepsis* was read by Dr. G. J. Finstad and was generally discussed.

The Hanover bill was read and discussed. It was moved and supported that we endorse the bill, but upon being put to a vote the motion was lost.

A "good roads movement" was next discussed and the secretary was instructed to notify the chairmen of the town boards of our county to see that the law (Section 1249 R. S. Wis.) regarding keeping the highways open is enforced.

Supper was served at the Royal Hotel before the business session. The meeting was adjourned until March 21, 1905.

B. J. STEVES, M. D., *Secretary.*

LINCOLN COUNTY MEDICAL SOCIETY.

At the annual meeting of Lincoln County Medical Society the following officers were elected for 1905: President, Dr. Jos. Farber; secretary, Dr. L. B. Collier; treasurer, Dr. W. H. Bayer.

Meetings are held monthly. L. B. COLLIER, M. D., *Secretary.*

MEDICAL SOCIETY OF MILWAUKEE COUNTY.

The regular monthly meeting, at which 41 members were present, was held in the Trustees' Room, Public Museum Bldg., Jan. 13, 1905, President J. W. Coon in the chair. Three new members were elected.

A case of extensive brain injury was presented by Dr. W. F. Becker. The oration of the retiring president, Dr. G. E. Seaman, was read; this appeared in the February issue of the JOURNAL. Dr. Wilhelm Becker presented a paper on *Morphology of the Blood,* classifying leucocytes and erythrocytes according to morphology, giving also the staining qualities of the elements. Dr. F. R. Weber presented a paper on *The Blood in Infectious Diseases,* discussing hypo- and hyperleucocytosis and their application in diagnosis and prognosis. He also spoke of the effect of certain drugs on the blood; acetanilid, antifebrin or antikamnia repeated two or three times, in 5-grain doses are said to reduce the number of red blood cells 10 to 25 per cent.; phenacetin and antipyrin have little of this effect; sulphonal and trional are also said to destroy red blood cells, while neuronal and veronal do not. Dr. T. L. Harrington reported a case of *trional poisoning,* characterized by large, bloody stools, and muscular weakness, which persisted for some time. Dr. L. F. Jermain did not wish to be considered as underestimating the value of blood examination, but said that it had been his experience that leucocyte counts were of little aid in determining perforations or presence of pus in appendicitis. Dr. D. Hopkinson asked Dr. Becker whether he thought it always possible to differentiate large lymphocytes and myelocytes without the triacid stains.

Dr. O. Fiedler stated that not enough study is given to the constitution of blood plasma, importance of an understanding of which by the general practitioner is indicated by the agglutination tests. The nature of these tests seem not to be understood if the experience of the Health Board is a criterion. The Widal test, to be of value, must be made with definite proportions of serum, and is accurate only in dilutions of 75 to 100 and with few bacteria in a field. Practitioners would make the test of more value by following closely the directions for collecting blood which accompany the outfit sent out by the Health Board.

Dr. W. Becker, in closing, said that leucocytes could be satisfactorily differentiated by one of experience with such stains as hemotoxylin-eosin. He contended that the Widal test should be made with fresh blood, there being a native agglutinin in the stroma of red blood cells which may be dissolved in breaking down the blood clot. He uses a capillary glass tube with a bulge in the middle, into which blood is drawn to replace the partial vacuum caused by heat when the bulge is held between the thumb and finger; the tube is then sealed by passing the ends through a flame. After a few hours there is a satisfactory separation of serum and corpuscles.

Dr. Weber said that he considered the presence of leucocytes of especial value in the differential diagnosis in the case of chronic forms of appendicitis.

President Coon announced the re-appointment of the Committee on Public Health and Legislation; J. J. McGovern, chairman; G. P. Barth and W. P. Jobse.

A. W. Gray, M. D., *Secretary.*

OUTAGAMIE COUNTY MEDICAL SOCIETY.

The annual meeting of the Outagamie County Medical Society was held at the Sherman House, Appleton, March 7, Dr. Boyd presiding.

Dr. Nolan, of Kaukauna, presented a malignant tumor on a finger at the site of an injury sustained several years ago. As the usual amount of clinical material failed to appear, Drs. Leith and Mills reported some interesting cases of empyema, and Dr. Powless, of Oneida, reported an inoperable gallstone case.

Papers were read as follows: The Complications of Scarlet Fever, Dr. William E. Zilisch, of Hortonville; The Practice of Medicine During the War of the Rebellion, Dr. J. T. Reeve, of Appleton; Otitis Media Catarrhalis, Dr. E. H. Brooks, of Appleton.

Officers were elected as follows: President, Dr. J. T. Reeve, of Appleton; vice-president, Dr. H. D. Fuller, of Seymour; secretary and treasurer, Dr. M. J. Sandborn, of Appleton; censor for one year, Dr. J. D. Doyle, of Little Chute; delegate, Dr. W. N. Nolan, of Kaukauna.

After the business meeting, a banquet, given by the local members to the visitors, was served. All went away feeling that this was the best meeting in the history of the organization. The next meeting will be held at Seymour, June 6.

M. J. Sandborn, M. D., *Secretary.*

WAUKESHA COUNTY MEDICAL SOCIETY.

At the annual meeting of the Waukesha County Medical Society the following officers were elected for the ensuing year: President, Dr. Henry G. B. Nixon, Hartland; vice-president, Dr. Benjamin U. Jacob, Waukesha; secretary, Dr. Maybelle M. Park, Waukesha; treasurer, Dr. William B. Campbell, Menomonee Falls; censor, Dr. Thomas Tomelty, Big Bend; committee on health and legislation, Drs. A. J. Hodgson, Waukesha, M. R. Wilkinson, Oconomowoc, and L. E. Youmans, Mukwonago.

WOOD COUNTY MEDICAL SOCIETY.

The Wood County Medical Society held an adjourned meeting Feb. 17, 1905, at Grand Rapids, at which the election of the following officers took place: President, Dr. O. T. Hougen; vice-president, Dr. K. Doege; secretary and treasurer, Dr. Frank Pomainville.

The attendance was good and a general discussion of matters for the good of the society was indulged in. Efforts will be made to have a joint meeting of Wood, Clark, Portage and Marathon County Societies at Marshfield in May. Three new members joined.

FRANK POMAINVILLE, M. D., *Secretary.*

FIFTH DISTRICT MEDICAL SOCIETY.

At a meeting called by Dr. J. R. Pritchard, councilor for the Fifth District, which was held at Sheboygan, Nov. 14, 1904, the Fifth District Medical Society was organized and the following officers were elected for the ensuing year: President, Dr. W. H. Gunther, Sheboygan; vice-president, Dr. J. E. Luce, Chilton; secretary and treasurer, Dr. Flora A. Read, Fond du Lac.

This district is composed of Calumet, Fond du Lac, Manitowoc and Sheboygan counties.

The second meeting of the society was held at Fond du Lac, Feb. 21, in the offices of Drs. Connell and Wiley; President Gunther in the chair. After calling the meeting to order Dr. Gunther introduced Dr. H. A. Sifton, of Milwaukee, whose subject was *New Growths of the Kidney.* Dr. Sifton spoke first of the relational anatomy of each kidney, and of the peculiarities as to location which might be found. The manner of palpating and percussing the abnormal kidney was then dwelt upon. The new growths of the kidney with their symptoms and the differential diagnosis were discussed in detail.

Dr. Frank S. Wiley, of Fond du Lac, read a paper upon *Cystitis.* The etiology, pathology, symptoms and treatment, medical and surgical, were discussed.

Dr. J. R. Pritchard, of Manitowoc, spoke on *Organization.* To be a member of County, District and State Societies should be a help to the physician in every way; not only to become a better physician, but also to become a less narrow-minded professional man.

An invitation for the society to meet at Manitowoc in June was accepted and the meeting adjourned to a supper and smoker.

FLORA A. READ, M. D., *Secretary.*

MILWAUKEE MEDICAL SOCIETY.

Meeting of Feb 14, 1905.

At the regular meeting held Feb. 14th, 1905, Dr. A. W. Rogers presented a paper entitled "*Some Remarks on the Use of Opium in Mental Diseases.*" In those cases of melancholia in which the mental anguish is so intense as to suggest suicide, opium is indicated. Care must be exercised to guard against the formation of the habit. Dr. Studley believes that in an institute the opium habit is easily prevented by the absolute control of the patient.

Dr. Sifton presented a paper upon the "*X-ray in Fractures.*" Properly interpreted, the radiograph is invaluable to the surgeon. That errors are possible, however, was demonstrated by a series of pictures taken for this purpose. Owing to this liability of error the X-ray may intentionally or unwittingly give rise to false diagnosis. Even with great displacement, repair may be excellent, and a displacement of one-fifth of the diameter of the bone does not noticeably affect the clinical result. Fluoroscopic examination is almost without value.

Dr. Hitz reported a case, and exhibited a radiogram in which the great cornu of the hyoid bone was mistaken for a dental broach in the throat. Dr. Seaman reported a case in which false diagnosis of a splinter of steel in the eye was made. Dr. Sickles said that much error was due to use of too low power apparatus.

Meeting of Feb. 28, 1905.

At the meeting held Feb. 28, 1905, Dr. Seaman exhibited an unusual case of *Double Optic Atrophy* in which there were numerous cholesterin crystals in the vitreous of the right eye. The patient was a man 56 years of age who had been employed for fifteen years in underground work for an electric lighting company. He had no symptoms of other nervous disease. Failure of vision began one year ago. Present vision: right eye, seeing fingers at six inches; left eye 8/200. The crystals were demonstrated with the ophthalmoscope.

Dr. H. Reineking read a paper entitled "*Some Anatomical Anomalies Encountered in Abdominal Operations, with Clinical Data and Comment.*" Four cases were related. 1. A case of horse-shoe kidney in a man suffering from chronic appendicitis. Palpation in the immediate vicinity of the umbilicus revealed a deep-seated, indistinct, immovable tumor, the nature of which remained in doubt until exploration during the operation for appendicitis made it perfectly clear. 2. Intestinal obstruction in the presence of, but not directly due to, a Meckel's diverticulum; accompanied by tonic, spastic contraction of the small and large intestines distal to the obstruction, and apparently congenital narrowing of the portion of the ileum situated between

the point of attachment of the diverticulum and the ileo-cecal junction. 3. An anomaly believed by the essayist to be the omentum, totally devoid of fat, very long and wide, attached throughout its lateral and lower margin to the peritoneum of the posterior abdominal wall, so as to enclose every part of the small and large intestines except the lower portion of the sigmoid and rectum, as if they were contained in an immense cyst. Complete obstruction of the lower portion of the sigmoid flexure had been brought about through compression by the lower margin of this membrane where it crossed the large intestine. 4. Complete transposition of the abdominal and thoracic viscerae.

Attention was called to the diagnostic and operative perplexities to which such anomalies might give rise unless the practitioner constantly bore in mind the possibility of meeting with them.

Prof. Bardeen, of the University of Wisconsin, presented by invitation a paper entitled: "*Certain Newer Aspects of Anatomy.*"

(This paper will appear in an early issue of the JOURNAL.)

HOYT E. DEARHOLT, M. D., *Secretary.*

SOCIETY OF GERMAN PHYSICIANS.

At the meeting of Oct. 15, Dr. A. J. Puls demonstrated the uterus of a woman, aged 44, extirpated on account of a large myoma. Dr. Puls also showed two large gall-stones which he had extracted with difficulty from the cystic duct of a woman, aged 52, who was suddenly taken with vomiting, severe colic and fever. The gall bladder was very much extended and had a whitish appearance, as if gangrenous. It only contained bile. Recovery.

Dr. L. F. Frank reported a case of leukoplakia of the tongue that had been unsuccessfully treated for a long time with all kinds of remedies. The affection disappeared after 15 applications of X-rays.

Dr. C. Zimmermann gave a description of the Institut Pasteur at Paris which he had visited during his sojourn in Europe last September.

Dr. C. Reinhard spoke on cystitis in two cases of hypertrophy of the prostate gland in old men, who had used the catheter themselves for years, but suddenly did not succeed. Under irrigations of the bladder and urotropin the status quo was soon restored.

At the meeting of Dec. 10, Dr. A. J. Puls presented a man, aged 20, whose inguinal hernia he had cured with injections of alcohol around the inguinal canal, according to Schwalbe's method.

Dr. L. F. Frank reported on a very severe reaction to X-rays in treating a relapse of a carcinoma of the foot, which, 2 years ago, had subsided under the same treatment without any alarming symptoms.

Dr. Frank also reported a syphilitic ulceration of the lids, which elsewhere had been treated with X-rays under the diagnosis of carcinoma. The affection healed rapidly under iodide of potash.

Dr. C. Zimmermann observed a case of apparent malingering. A central corneal opacity was claimed to be caused, a week previously, through cauterization with sulphuric acid. The impairment of vision out of proportion to the opacity, the lack of recent inflammatory signs, an anterior synechia stretched out into a long thread, anterior polar cataract, and nystagmus

plainly showed that the affection was an old one, apparently due to a perforating ulcer of the cornea in early childhood.

At the meeting of Feb. 4, Dr. C. Reinhard communicated a case of fracture of the femur in an old woman, afflicted with hemiplegia from thrombosis of the Sylvian artery. The fracture healed in an extension bandage.

Dr. E. Kováts related a case of probable ulcer of the duodenum. The patient suffered from colic, pain at the liver and slight icterus, but recovered under treatment. Suddenly he had attacks of vomiting, and no stool. An operation was objected to and the patient died after ten days. A postmortem was not consented to. C. ZIMMERMAN, M. D., *Secretary.*

JOHNS HOPKINS MEDICAL SOCIETY.

Meeting of Oct. 17, 1904.

Dr. Watts. *Plastic Operation for Manufacture of New Lip.* The patient, a school-boy, while holding a pony, had his entire lower lip, extending downward from the angles of the mouth to the mental prominence of the mandible, torn away. On July 14, 1904, a flap of skin about 12 inches long was cut on the outer side of the right arm, and, leaving it attached at its upper end, was folded back and sutured by its corners to the back. The raw surface of the arm was covered by skin grafts taken from the right and left thighs. With these islands of implanted epithelium the wound healed very rapidly. On August 18, 1904, the sutures were cut and all of the edges freshened up. The flap was next sutured in place. The under portion was freshened up and sutured to the periosteum of the jaw. The flap was carried well up over the margin of the teeth, and the arm then held in position by a plaster cast. On Sept. 10, 1904, the skin flap was freed from the shoulder under cocaine. On Sept. 15, the under surface of the flap was freed, the granulations were freshened up, and the lower border of the flap sutured to the skin beneath the chin. The left border was sutured, but the right left free projecting some distance beyond the edge on that side. No more was done in fear of interfering with the circulation. On Sept. 28 the other edge was freshened and sutured to the freshened wound. The lip healed *per primam* in each case. After complete healing had taken place the lip sagged slightly in the middle. A small incision was made in the mucous membrane under cocaine, and it was slightly drawn down correcting this defect. The patient was discharged later with a good lower lip.

Dr. Cullen exhibited a patient from whom he had removed a *carcinomatous left kidney* about 20 months previously. A second operation was performed 15 months later for the removal of a metastatic growth of the liver. Healing was very satisfactory, but the patient now exhibits some secondary malignant nodules at the site of the original kidney operation.

Dr. McCallum exhibited a specimen of *acute vegetative endocarditis,* involving the tricuspid, mitral, and aortic valves, and showing in addition the rather unusual lesion of an embolism of the descending coronary artery.

(H. T. H.)

BOOK REVIEWS.

The Ophthalmic Yearbook. By EDWARD JACKSON, A. M., M. D., Denver. A Digest of the Literature of Ophthalmology with Index of Publications for the year 1903. 45 illustrations. The Herrick Book and Stationery Co., Denver. 260 pp. Price $2.00.

As stated in the introduction to this work "the literature of ophthalmology grows by 20,000 to 30,000 pages each year," and it is manifestly impossible even for one who has access to this literature to properly digest it all and separate the grain from the chaff; and since fully three-fourths of the matter is chaff, the task would not be a pleasant one if it were possible of accomplishment. Dr. Jackson has, in this effort, set himself this task for the benefit of the profession, and he has done the work well.

He has sought to present a digest of the most important literature of the year, in sufficient detail to be helpful, together with a list of all the more important communications appearing during the year, and has arranged them alphabetically according to the authors' names. The work also contains a list of the books and monographs on ophthalmology published in all languages during the previous year, and a complete index.

Altogether the book is of special value to workers in this particular field and should be useful as well to others who wish to get a comprehensive view of the advances in ophthalmology, with the least possible effort; the book is well printed and in many instances useful illustrations are reproduced.

(G. E. S.)

International Clinics.—A Quarterly of Illustrated Lectures. Edited by A. O. J. KELLY, A. M., M. D. (The J. B. Lippincott Co., Philadelphia) Vol. IV. Fourteenth Series.

We are particularly impressed with the excellent selection of papers that make up this volume, which completes the 14th series of this publication.

Four papers on "Treatment," six on "Medicine," seven on "Surgery," and four on special subjects, indicate a most excellent and comprehensive distribution of material. Added to this is the fact that among the contributors are some of the best known medical writers, both at home and abroad.

An article by A. Javal of Paris, on "*Indications for the Dechloridation Treatment,*" in which there is detailed the history of two cases of nephritis that testify to the excellent results of this plan of treatment, deserves very close study. George Hayem, of Paris, contributes a paper on "*The Excessive Use of Drugs in the Treatment of Chronic Diseases, with Reference to Medicinal Intoxication,*" calling attention to a danger in our therapeutics that is not without foundation. Dr. S. Solis Cohen of Philadelphia adds an instructive lecture on "*Several Cases of Joint-Disease,*" that presented themselves with the erroneous "home-made" and even "doctor-made" diagnosis of rheumatism, and calls attention to the importance of their pathologic and etiologic diagnosis. Dr. F. Parkes Weber and J. H. Watson of London contribute an article on "*Chronic Polycythemia with Enlarged Spleen* (Vaquez's Disease), *probably a Disease of the Bone-Marrow.*" Equally interesting are the con-

tributions of H. Senator of Berlin, "*The Clinical Significance of Albumosuria*"; Dr. John Lincoln Porter of Chicago, "*Tuberculous Spondylitis; Tuberculous Coxitis*"; and Dr. Alfred Scott Warthin of Ann Arbor, "*Recent Investigations Concerning the Pathology of the Infectious Diseases.*" Other contributors are: Dr. Myron Metzenbaum of Cleveland, Ohio; F. LeJars of Paris; Sir Dyce Duckworth of London; Alexander Crombie of Calcutta, India; Robert Dawson Rudolph of Toronto; E. H. Bradford of Boston; Wisner R. Townsend of New York City; James K. Young of Philadelphia; W. Arbuthnot Lane of London; Anthony A. Bowlby of London; Ernest Gallant of New York; F. A. L. Lockhart of Montreal; Daniel R. Brower of Chicago; and Chas. F. Craig of San Francisco.

It is impossible to mention in detail the excellent features of the individual articles. Suffice it to say that the International Clinics, under the able editorship of A. O. J. Kelly, is presenting a most creditable array of subject matter sufficiently diverse in selection to appeal to every practitioner, and by a staff of clinicians who—individually and collectively—could hardly be excelled.—(A. J. P.)

Text-Book of Alkaloidal Therapeutics.—This book is dedicated to those who believe in "*The smallest possible quantity of the best obtainable means to produce a desired therapeutic result.*" It takes up in alphabetical order the various "alkaloidal" drugs. Each drug is treated of in a very concise manner and under each heading are given a description of the drug, its physiologic action, and its therapeutic indications.

It is rather dangerous to allow a statement such as the following to go unchallenged. "It is important that no error in diagnosis be made, [as to croup], if satisfactory results are to be obtained from the use of the remedy, [calcium iodized], for while it is almost certain to cure any case of spasmodic or membranous croup in which it is used within reasonable time, it possesses alone no curative virtues in diphtheritic croup."

The interleaving is doubtless a good plan for it enables the reader to record observations of his own opposite those of the author. The doses of all drugs are given in both the metric and apothecary's system, though we can hardly see the object in noting the fractional doses of the latter as the equivalent of the former. There is but little actual—and probably no therapeutic difference between 1-67 grain and 1-60 grain of most drugs, and it would therefore simplify the acquisition of the metric equivalents by one not familiar with it, by using even numbers as the approximate equivalents. Thus, 0.001 would be approximately 1-60 grain (not 1-67); 0.005 would be 1-120 grain (not 1-134), etc.

It is but natural that for him who is a disbeliever in this method of administering drugs, a preformed prejudice may hide his better judgment, though it is without question true that the positiveness that characterizes the statements made as to the definite action of these alkaloids upon well defined conditions, will win adherents to this school of therapeutics.—(A. J. P.)

CURRENT LITERATURE.

Suggestions Concerning the Action of Alkalies and Their Indications in Infant Feeding.—T. H. Southworth (*Archives of Pediatrics*, February, 1905) shows that the addition of alkalies to the diluents of cows' milk in infant feeding cannot be justified on the theoretical ground that the otherwise acid milk mixtures are thereby made to conform in alkalinity to breast milk, because (1) breast milk has been proven to be faintly acid, and (2) the alkalies added in practice are not in the proportion to overcome acidity only, but usually in greater and varying amount. One ounce of lime water or 20 grains of bicarbonate of soda, usually considered equivalent, are said to be sufficient to render 16 to 20 ounces of cows' milk alkaline, but in practice this amount of alkali is added to 20 ounces of milk mixture irrespective of the amount of milk contained therein. However, since excellent clinical results are obtained by the addition of lime water or bicarbonate of soda, it is rational to endeavor to find the explanation of their successful use.

He comes to the conclusion, after examining the action and nature of these alkalies, that, while both modify and inhibit the action of rennet in the stomach, in forming paracasein clots, to about the same extent, limewater, being the weaker antacid, is quickly neutralized by the acid of the stomach; but that bicarbonate of soda has a decided antacid effect which is overcome with greater difficulty. The antacid effect of limewater is overcome by somewhat less than 1 ounce of gastric juice; 20 grains of bicarbonate of soda require for neutralization 10 ounces of gastric juice, therefore stomach digestion is postponed proportionately longer by the latter.

Summing up, milk diluted by plain water is promptly clotted in the stomach by rennet and the clot is transformed into tougher masses when acid is secreted; lime water in a milk mixture checks this action of rennet and makes the clotting more gradual, altering the form of the curd and allowing, possibly, of the passage of some unaltered milk into the intestines, but leaves no large amount of alkali behind to inhibit stomach digestion; with bicarbonate of soda added, the action of rennet, hydrochloric acid and pepsin are all prevented, allowing the escape of unaltered alkaline milk into the intestine and perhaps relieving the stomach of all burden of digestion. The effect of adding alkalies seems, then, to be that of influencing the place and type of digestion, and the further problems to be worked out are to determine the proper kinds and quantity of alkali to be used; and also to determine more accurately the indications for their use or non-use in different types of cases.—(A. W. Gray.)

Gall-bladder and Biliary Duct Surgery.— D. A. K. Steele (*Annals of Surgery*, Feb., 1905) appeals strongly for early diagnosis, shorter period of medical treatment, early surgical intervention, and a lessened mortality for gall-bladder and biliary duct diseases, which should be recognized as surgical affections and are only amenable to surgical treatment.

The former dictum of three months of medical treatment is altogether too long, and leads to unnecessary suffering, serious complications and a

higher mortality. Many of these cases are treated by medication, diet, massage, a course at Carlsbad or West Baden, etc., without permanent benefit, and the delay usually causes serious complications that increase the difficulties of operation and add to its mortality. Uncomplicated cholecystitis and cholelithiasis give practically no mortality under prompt and proper surgical treatment.

Several cases are cited to show the danger of delay and the complications that arise from postponing a necessary surgical operation to a time when it is done as a last resort.—(F. E. W.)

An Inquiry into the Etiology and Nature of the Toxic Erythemata.—JAY F. SCHAMBERG (*Jour. of Cutaneous Diseases*, Oct., 1904). Summarizing the various classifications, which have been attempted by various writers, the author tentatively suggests the following:

1, Bacterial and protozoal toxins; 2, ptomains; 3, leucomains and other metabolic poisons; 4, drugs.

In the first class the cause of the eruptions is evidently caused by the presence of specific toxic substances as found in scarlet fever, measles, rubella, smallpox, typhus, influenza, pneumonia, malaria, gonorrhea, cholera, rheumatic fever, typhoid fever, etc.

Under the head of ptomains the various food poisonings which frequently give rise to eruptions are included and are classified as follows: Mussel, fish, meat, milk, cheese, and vegetable poisoning.

These poisons are either introduced with the food or may develop in the alimentary canal as a result of the action of intestinal bacteria on the ingested material.

The leucomains are divided into two groups, the uric acid (including adenin and the various xanthin products) and the kreatinin group. The albumoses, peptones and retention poisons due to diseases of the eliminative organs are included.

The well-known numerous manifestations of drugs constitute the fourth class.

The similarity of the action of various poisons, as, for instance, that of ptomains and belladonna poisoning is emphasized.

The writer concludes that he is justified in assuming that nearly all cases of scarlatinoid and morbilliform erythema, E. multiforme, nodosum, urticaria and purpura are a result of the circulation in the blood of chemical poisons. (L. F. Frank.)

Treatment of Lupus Erythematosus.—M. OPPENHEIM (*Wiener klin. Woch.*, Nov. 3, 1905) reports favorable results with a modification of the Holländer method. He proceeds as follows: after the administration of 0.05 g. quinine sulphate to determine the possible existence of an idiosyncrasy toward the drug, the patient is given 0.5 g. quinine night and morning during the first three days. The diseased areas are dabbed with absolute alcohol and ether to remove the crusts, after which tincture of iodine is energetically brushed in. At the end of every three days the dose of quinine is increased by 0.5 g., until eventually 8 half grams are taken daily. This dose is main-

tained until the lesions are distinctly paler and less elevated, whereupon it is decreased by a half gram every third day until 0.5 g. is taken twice a day.

Experiments upon rabbits show that after subcutaneous application the skin contains relatively large amounts of quinine and hence excretes it. Other experiments show that after administration of quinine the areas of skin to which iodine has been applied contain more quinine than areas not treated with iodine, and that the amount of quinine contained varies with the amount of iodine used locally. Quinine, therefore, probably has a specific action upon lupus erythematosus, the action of iodine being chemotactic toward quinine and resulting in an increase in the amount of quinine contained in the skin. —(O. H. Foerster.)

Pruritus from the Use of Tobacco.— Bottslein (*Monats. f. pract. Dermatologie*, Nov., 1904) reports the following cases:

Case 1. H. B., post-officer, suffered with severe pruritus of the eyebrows during evening hours. He was accustomed to smoke one to three pipes in the evening. The pruritus disappeared after discontinuing the habit. Again resuming the habit the pruritus returned to disappear again after quitting the use of tobacco.

Case 2. A. T., formerly a passionate smoker, had to cease on account of a severe gastritis. Again resuming the use of cigars, cigarettes and pipe it was followed on the second day by severe general pruritus, increasing rapidly, to disappear after abandoning the habit. Each new attempt brought on the pruritus, less severe, however, after the use of cigarettes and the short pipe.

Case 3. A. B., complained of severe itching in the anal and scrotal region, twelve to twenty-four hours after smoking, which disappeared immediately after discontinuing the habit.

The writer draws attention to the fact that apart from some French authors, the ordinary text-books make but slight mention of tobacco as an etiological factor in pruritus. (L. F. Frank.)

Traumatic Injury of the Intestine without Injury to the Abdominal Wall.—Carleton Flint (*Med. Record*, Feb. 18. 1905) states that this rare condition is generally due to some blunt force, not necessarily in the immediate vicinity of the point of contact. The abdomen need not be hit at all, as, for example, a fall upon the feet. Most common causes are horse-kicks, falling from a height, blow from a fist, shovel or similar object. Most ruptures are due to crushing against bony structures. In over 45 per cent. of the cases there is injury of some other abdominal structure. Symptoms of this condition are shock, pain, tenderness, muscular rigidity more or less marked, vomiting, bloody stools, abdominal dulness and tympany. Frequently the symptoms are indefinite. Where there is only a history of trauma and moderate rigidity of the abdomen the author advises an early and quick operation.—(B. S.)

Epitheliomata and Their Treatment.— Prof. v. Mibelli, Parma. (*Monatsh. f. pract. Dermatologie*, Sept., 1904). In 1897, after Cerny and

Trunecek reported the favorable action of the dilute alcoholic solution of arsenious acid, As_2O_3, on malignant growths, the author began his researches, modifying, however, the methods applied by the above writers. He reports the clinical history of twenty patients, treated locally by arsenious acid in liquid form, of which number fifteen were completely cured; in the remaining five recidives occurred, or the result was incomplete or negative. The solution mostly used by Prof. Mibelli consisted of the local applications on cotton of arsenious acid (As_2O_3) 1.0, water and alcohol ää 25.0, or alcohol and ether ää 25.0, applied consecutively for a number of days under a fixed dressing, renewed every twenty-four hours. The above treatment the author considers applicable in all beginning epitheliomata of the skin, where decided malignancy is absent, as the severe, decidedly malignant epitheliomata, although favorably acted on, are not permanently cured; an incomplete result will not act detrimentally with regard to treatment by other methods. The cosmetic result is most satisfactory. (L. F. Frank.)

Urine Examination.—R. C. Cabot, Boston (*Journal A. M. A.*, March 18-25), states that incited by a statement of Councilman that the chemical and microscopic examination of the urine failed to give certain information of the character of the renal lesions, as well as by discrepancies coming under his own observation, he has compared critically the records and post-mortem findings in the cases that have come to autopsy in the Massachusetts General Hospital since 1893. Although the number of cases is not large, he thinks they warrant the following conclusions: 1. Many cases of acute glomerular nephritis occur that are unrecognized by any known methods of examination. 2. The diagnosis is at fault in some cases of subacute and chronic glomerular nephritis, but in the great majority of cases the condition of the urine, taken in connection with other symptoms, foretold the autopsy findings. 3. In chronic interstitial nephritis the diagnostic resources appear to be neither so sufficient as in the chronic glomerular form, nor so inadequate as in the acute glomerular nephritis. In about a third of the cases the diagnosis was correctly made before death. 4. Among other conditions mistaken for nephritis by too much reliance on the urinary findings are senile and arteriosclerotic condition, mistaken for chronic nephritis, while in conditions involving passive congestion or acute kidney degenerations, the urine occasionally simulates that of acute nephritis. Even where no lesions are found at autopsy, the urine is sometimes highly albuminous and full of casts. 5. In ordinary urinary examinations the common errors are: (a) The attempts to estimate urea without accurate knowledge of the patient's metabolism. (b) Stating that renal cells are present when all that is seen are small mononuclear cells, perhaps from the kidney tubules, perhaps not. 6. Cryoscopy and other attempts to test the renal permeability more directly are not yet capable of supplementing in clinical work the older methods of examination. Cabot holds that the vast majority of estimations of urinary solids, including urea, are a waste of time, since they are not and cannot be made part of a general metabolism experiment, and that the attempt to estimate the anatomic condition of the kidney by measuring albumin and by searching for casts is fallacious. The most reliable data are the twenty-four-hour quantity, the specific gravity and the color.

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ADDRESS.

RECENT PROGRESS IN ANATOMY.

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In an address delivered at the opening of the Wistar Institute of Anatomy at the University of Pennsylvania in 1894 (Leaven of Science, *University Medical Magazine,* June, 1894, p. 9) Professor Osler repeated the following story told by Sir Robert Christison, of Barclay, one of the leading English anatomists of the early part of the 19th century. He gives it as an illustration of the old attitude of mind still met with among the broad and better teachers of the subject:

"Barclay spoke to his class as follows: 'Gentlemen, while carrying on your work in the dissecting-room, beware of making anatomical discoveries; and above all beware of rushing with them into print. Our precursors have left us little to discover. You may, perhaps, fall in with a supernumerary muscle or tendon, a slight deviation or extra-branchlet of an artery, or, perhaps, a minute stray twig of a nerve—that will be all. But beware! Publish the fact, and ten chances to one you will have it shown that you have been forestalled long ago. Anatomy may be likened to a harvest field. First come the reapers, who, entering upon untrodden ground, cut down great stores of corn from all sides of them. These are the early anatomists of modern Europe, such as Vesalius, Fallopius, Malpighi, and Harvey. Then come the gleaners, who gather up ears enough from the bare ridges to make a few loaves of bread. Such were the anatomists of last century—Valsalva, Cotunnius, Haller, Winslow, Vicq d'Azyr,

*Address delivered before the Milwaukee Medical Society, Feb. 28, 1905.

Camper, Hunter, and the two Monros. Last of all come the geese, who still contrive to pick up a few grains scattered here and there among the stubble, and waddle home in the evening, poor things, cackling with joy because of their success. Gentlemen, we are the geese.' "

It is my purpose this evening to indicate a few of the lines of progress which have within comparatively recent years been opened up within the field of anatomy by those anatomists who have not been content to be geese confined to a barnyard, but who have had wings with which to fly and eyes with which to distinguish from above new, rich, and fruitful territories.

Historically the first aspect of anatomy to be developed, and that even to-day the most popular, is teleological or physiological anatomy, the study of structure from the standpoint of the use to which the organs are put or of the functions which they perform. The curiosity of most people is satisfied if some use is assigned to any organic structure to which the attention is called. The vermiform appendix has led many of late, however, into a perhaps too ready belief in the uselessness of at least one part of the human body.

In physiological anatomy the chief progress in recent years has been in the direction of a better understanding of the localization of function within the nervous system. Charles Bell's discovery, less than a century ago, of the difference of function between the dorsal and ventral roots of the spinal nerves was an initial step in the modern development of this subject.

During the last half century the subject of the peripheral distribution of the nerves has been still further simplified by the experimental work of Eckhardt, Sherrington, and others on the lower animals, and the clinical studies of Head and others. It has been found that corresponding to the sensory roots of each spinal nerve there is a segmental peripheral zone of maximum distribution. In the region of the trunk each segmental zone encircles the body like a band, but the zones are so wide and so overlap that any given area seems to be supplied with at least three spinal nerves. In the region of the limbs similar over-lapping zones may be found, but the overlap is greater here than in the case of the nerves of the trunk. They are arranged in a regular sequence beginning at the margin of each limb nearest the head and then extending down the radial or tibial side of the limb to the hand or foot and thence back along the distal margin of the limb.

The great importance of the discovery of these peripheral sensory zones is well understood by the surgeon. From a given area of

anesthesia or sensory disturbance due to a lesion of the spinal nerves or spinal cord, the seat of the lesion may be deduced with fair accuracy. In place of extensive knowledge of nerve distribution a few simple general principles suffice to guide in the diagnosis. Head's studies of the relation of visceral disease to areas of herpes zoster and peripheral sensory disturbances seem likewise destined to aid in a more accurate diagnosis of internal disturbances. Langley and others have also in recent years greatly extended the knowledge of the localization of function in the sympathetic nervous system, but this field of work is still rich in possibilities.

The application of experimental physiology and the study of diseased conditions has served to simplify a knowledge of the peripheral nervous system of man, the structure of which, as revealed by dissection, had previously been determined with great accuracy. If we turn to the central nervous system we find that during the past century knowledge of structure has extended much farther than that of function, although both have advanced with great strides.

At the beginning of the 19th century something was known of the external form of the brain, but that was about all. As Osler has said in the address above referred to: "Read, for example, in the third edition of Wistar's 'Anatomy,' edited by Horner in 1825, the description of the convolutions of the brain, on which to-day a whole army of special students are at work, medical, surgical and anthropological, and the functions of which are the objective point of physiological and psychological research. The whole subject is thus disposed of: 'The surface of the brain resembles that of the mass of the small intestine, or of a convoluted, cylindrical tube; it is, therefore, said to be convoluted. The fissures between these convolutions do not extend very deep into the substance of the brain.' The knowledge of function correlated with this meagre picture of structure is best expressed, perhaps, in Shakespearean diction, 'that when the brains were out, the man would die.'"(1)

Reil early in the century gained much new insight into the structure of the brain by tearing apart hardened specimens. Burdach advanced the subject still farther by the use of thin sections, and Stilling by the introduction of serial sections, and finally great advances were made by van Gudden and others who introduced experimental methods into this field of work. The new anatomical facts thus gained opened the way for the discovery by Broca, early in the sixties, of the speech center in the third left frontal convolution, and for the experimental work of Fritsch, Hitzig, and others on cortical

1. Leaven of Science. pp. 9-10.

localization. During the last thirty years experimental physiology and clinical and pathological studies have greatly extended knowledge of these subjects, so that to-day it is possible to localize accurately in many instances a focal area of disease in the brain.

Of the various methods that have been utilized for unravelling the structure of the brain one of the most fruitful is that of Flechsig, who has found that bundles of nerve fibres belonging to different nerve paths become medullated at different times. Thus by studying fetal and infant brains by aid of sections in which the medullated fibres are stained black, he has been able to trace from stage to stage the development of paths the function of some of which may be judged from their connection with structures the function of which is known. Quite recently he has brought out a new paper in which his latest studies in this field are described. It would take us too far into technical details were we to try to give an account here of these latest researches. In brief it may be stated that he has found in the cerebral cortex sensory-motor areas connected directly with lower motor and sensory regions, which, in turn, are connected with the voluntary musculature and organs of special sense, and association areas not thus directly connected with the lower regions of the central nervous system but serving to unite the sensory-motor areas. He has been able by the methods above indicated to map out much more clearly than his predecessors the limits of these various areas.

Another most interesting line of work we owe largely to American investigators. This is the attempt at a correlation between mental activities exhibited by an individual and the structure of his brain. B. G. Wilder has been interested in this subject for years and has collected the brains of several noted individuals at Ithaca, a few of which he has described. Some years ago H. H. Donaldson gave a most valuable account of the blind deaf-mute, Laura Bridgeman.

In 1890 the American Anthropometric Society was founded by William Pepper, Harrison Allen, J. Leidy, F. X. Dercum and E. A. Spitzka. Later E. D. Cope, A. J. Parker and Philip Leidy joined the society. The purpose of the society was the donation of the brains of the deceased members for scientific purposes. The brains of Pepper, Allen, Joseph and Philip Leidy, Cope and Parker have been studied by E. A. Spitzka, whose previous work along similar lines admirably qualified him for the task. Of the various important facts found the following stated in Spitzka's words are among the most interesting:

"Before I state certain interesting results from special studies of the form and size of the callosum in various brains, permit me to introduce some remarks concerning the prevailing ideas about the

relative importance of white and grey matter. So much has been said of the grey matter and its constituent nerve-cells that the very notable researches of Flechsig and his co-workers in the field of myelin-development is often overlooked. Were it not for the manifold connection of such cells with each other as well as with the periphery by means of the millions and millions of fibers, such a brain were as useless as a multitude of telephone or telegraph stations with all inter-connecting wires destroyed. The bulk of the white matter in the brain (meaning, of course, the normal brain) therefore signifies elaborated grey matter, and hence the significance of brain-weight in relation to brain-powers; for even though there be, as has been computed, over nine billion cells in the cortex, their weight is probably less than 1 per cent. of the total brain-weight. But if there is a still more intricate inter-connection of nerve-cells, out of proportion to their number, as it were (by means of untold numbers of association neurones), the mass of white matter must necessarily be greater. So characteristic is this preponderance of white matter in the brain of Man, and so needful is such an elaboration and amplification of the cerebral architecture to the workings of the human mind that it is only necessary to glance at the cross-sections of the brains of lower animals as compared with that of Man (Chart: Cat, Baboon, Man) while we pause to think that, after all, it is this enormous co-ordination of the separate units of thought and action which constitutes the somatic basis of the highest mental functions. And in the Mammalian series, as we ascend from the small-brained Marsupial with its few callosal fibers intermingled with those of the dorsal or hippocampal commissure to the great neo-pallial commissure which the brain of Man exhibits, we may perceive an indication of the elaboration of at least one division of the great complex of association systems: I refer now to the bilateral co-ordinations exclusively. * * And the examination of the brains of these notable men, possessing large capacity for doing and thinking much more than their fellows, shows that, compared with the brains of ordinary men individually and collectively, they have larger callosa. The callosum of the brain of Joseph Leidy is the largest on record and is approximately twice the ordinary size."*

*The interest aroused by Dr. Spitzka's paper, from which the lines just quoted are taken, led the Association of American Anatomists last December to appoint a committee of three (E. A. Spitzka, B. G. Wilder and A. Hedlicka) to continue the work of getting men of note to will their brains for subsequent scientific study. Any aid along this line will be greatly appreciated by the committee. (E. A. Spitzka, M. D., Chairman, 66 E. 73d St., New York, N. Y.)

The study of function in relation to structure depends primarily, as we have seen, on some understanding of the actual physical condition of the structures concerned. Anatomy must to a greater or less extent precede physiology, although physiology in turn may be essential to the farther progress of anatomy. Since anatomy often has to pursue its independent way without an accompanying understanding of function, and since it has a value apart from that which it bears to physiology, there has been since the time of Vesalius an extensive development on the one hand of the descriptive anatomy of man in its systemic and topographical aspects, and on the other hand of the comparative gross and microscopic anatomy of various organisms from the standpoint of form and structure.

By the end of the 18th century human structure as revealed by dissections was so accurately described that but a few minute structures were left to be discovered outside of the central nervous system. Yet there still remains much to be done in the field of human anatomy. The frequency and extent of variations in structure exhibited by individuals must be more accurately determined than hitherto. The study of variation of structure in relation to age, sex, family, race, environment and capacity, is of great importance. A beginning along these lines was made over a century ago by Blumenbach, the founder of physical anthropology. Although at first the chief attention was paid to external features, such as the color of the hair and the eyes, and to the comparative measurements of simple structural relations, such as the ratio of the width of the skull to the length, during the last half century more and more study has been devoted to a statistical study of variation of internal structures, and many points of considerable importance to the surgeon have thus been determined. A great value of this line of work lies in the fact that it may be carried out in the dissecting room and thus the attention of student and instructor quickened by the renewed interest which comes from devotion to a growing science rather than to one undergoing the degenerations of completeness.

Of the various parts of the body the skeleton has received the most attention from the standpoint of variation. As an example I may be permitted to mention some data which I have recently gathered from over 1,000 records of the human spinal column, and which show that the 19th vertebra, commonly the last thoracic, had no free ribs and was hence of the lumbar type in 30 instances, 2.8 per cent., and that on the other hand the 20th vertebra, commonly the first lumbar, had free costal processes in 23 instances, 2.2 per cent. Cases have also been reported where the 21st vertebra, usually the 2d lumbar,

has carried free ribs (Rosenberg). Variation takes place in the articular processes as well as in the costal elements of the vertebræ at the thoracico-lumbar border (Topinard).

Variation of the lumbo-sacral boundary is likewise frequent. Thus out of the 1,059 instances above mentioned in 28 instances, 2.7 per cent., the 24th vertebra, commonly the 5th lumbar, was the first sacral and in 47 instances, 4.4 per cent., the 25th vertebra was of the lumbar type. The 25th vertebra may exhibit one of many transitions from the sacral to the lumbar type. This subject has been well treated by Paterson. Papillault has contributed an interesting paper on lumbar variations and Cunningham on the proportion of bone and cartilage in the lumbar region.

At the sacro-coccygeal border variation is even more frequent than in the regions more anterior. Paterson found diminution in the number of sacral vertebræ in 2.62 per cent., and increase in their number in 35.46 per cent. of the 265 sacra he examined, and Bianchi in 17.5 per cent. of the female, 23.3 per cent. of the male, and 21.23 per cent. of the total number (146) of sacra examined. In this count he excluded sacra in which compensation for lumbo-sacral alterations was to be seen. Bianchi thinks that the 1st coccygeal vertebra belongs properly to the sacrum. In the 1059 instances mentioned above I find that the 30th vertebra, usually the 1st coccygeal, was reported sacral in nature in 91 instances, 8.6 per cent., and the 29th, commonly the last sacral, coccygeal in 27 instances, 2.5 per cent. It is possible that variations of this nature were sometimes overlooked by those making up the tables from which the above data were obtained.

Similar though less extensive studies have been made of variation in the blood vessels, muscles and peripheral nerves. Knowledge of these variations and their frequency should at times prove of practical importance to the surgeon. From the scientific standpoint it may in time be possible through studies of this kind to determine the direction of the evolution of human races. Several investigators, for instance, believe that the human trunk is gradually becoming shorter, but positive proof of this is at present lacking. Extensive statistical studies of variation are at present being conducted on the lower organisms for the sake of the bearing which they have on evolution. A new journal, Biometrika, is devoted to this subject.

The value of the comparative study of the structure of various organisms for the understanding of the structure of any one organism need not here be dwelt upon. Study of comparative anatomy had as much to do with the light Malpighi threw upon many details of structure still remembered by his name, like the Malpighian corpuscles

of the kidney and the spleen, as did the compound microscope which he employed. So also the enormous progress made during the nineteenth century in the study of organic structure has been the result of comparative studies carried out upon developing and adult organisms, as well as of improvements and extension in the use of the microscope and the development of technical methods of study. To-day one might as well try to read without knowledge of the alphabet as to understand anatomy without some acquaintance with histology and histogenesis, comparative anatomy and embryology.

When the microscope began to come into extensive use toward the latter part of the first half of the nineteenth century, the different organs, either fresh or hardened in various fluids, were dissected and teased apart in order that their finer structure might be made visible through the higher powers of the microscope. Later various methods of staining the tissues were discovered and then methods of sectioning the various organs into thin slices so that still more minute structural differences might be made out. While many new facts were discovered by these later methods there was a loss due to the fact that microscopic structure came to be thought of rather in the terms of two dimensions than of the three dimensions of space. Most of the pictures in the histological and embryological text-books of to-day thus represent structure in a flat plane. The better anatomists soon recognized this defect and tried various methods of reconstructing the third dimension of microscopic objects studied in a series of sections. His was a leader in this work, but the most successful method was discovered by Born and published by him in 1876. The object to be studied is cut into a series of sections of uniform thickness, then a drawing is made of each section magnified to a definite scale and each drawing is transferred to a wax plate of a corresponding thickness. That is, if the pictures of the sections were magnified one hundred times the wax plates are made one hundred times thicker than the sections. Then the wax plates are cut out to correspond with the outlines of the structures studied and piled up in a series corresponding with that into which the object has been sectioned. The parts of the plates corresponding to each structure are fused and a magnified wax model of the structure thus obtained. This method has proved of especial value in the determination of the form of organs in embryos too small to be easily dissected, or of young human embryos too rare to be sacrificed for dissection. It has also proved of great value in the determination of the form of the structural units of the organs of the adult body. Thus it was by the use of this method, associated with comparative anatomy, that Miller was enabled much more accurately

than hitherto to determine the true nature of the ultimate morphological units of the mammalian lung.

There is a less general knowledge, apparently, of organ-units, than of the tissue units, the cells and their products, or of the external form of organs and their grosser structure. An organ-unit occupies in relation to an organ somewhat the position of a molecule in relation to a mass of a given substance. It is the ultimate unit into which the mass can be divided and still retain its essential characteristics. Divided still further the molecule becomes reduced into less complex molecules or into atoms. And so an organ may be looked upon as composed of organ units each of which has the essential characteristics of the organ and each of which, sub-divided, becomes broken down into tissues or tissue complexes no longer maintaining these characteristics.

In some organs, like the voluntary muscles, the cells seem to be the essential organ units. In other organs, like most of the glands and the lungs, the functionally active cells are arranged with more or less specific relations to vascular, skeletal and other structures in such a way that definite structural units may be made out.

Embryology has a great value in the study of anatomy because the simple conditions existing in the embryo tend to reveal essential features hidden among the complexities of adult structure. This is especially true of human anatomy. The greatest advances made in the subject during the last generation have been due largely to the embryological researches of His and other anatomists. In this country Professor Mall has extended this line of work and has got together a collection of human embryos at Baltimore equalled nowhere else. The practical bearings of this work may be illustrated by Mall's work on the development of the intestines. He was able to show that in the adult various regions of the small intestines occupy fairly definite areas of the abdomen. With a knowledge of these areas a surgeon should be able to tell with some accuracy by its position in the abdomen the part of the small intestine affected by a disease.

I have now given a few examples of modern progress along the lines of anatomy as applied to physiology and of anatomy as a pure science of structure. Lastly I desire to say a few words about a subject that is coming more and more to the fore, the study of the physiological factors concerned in tissue differentiation and the organization of matter.

Into a discussion of the broad fundamental features of reproduction and evolution, and the mutual relations existing between these subjects and anatomy, I have not time here to enter, even were I

competent to discuss them. I wish merely to call attention to a few of the more interesting lines of experimental work now being done to determine the essential factors underlying embryology and regeneration and to discover means of voluntarily controlling development and growth in the animal organism.

The formative factors residing within organisms normally serve three purposes, (1) to maintain typical form and structure under the normal condition of life, a constant loss and repair ever taking place, (2) to restore structure after injury, a power varying greatly in different organs and organisms, and (3) to give rise to parts capable of differentiating into new organisms.

Practical considerations have led surgeons to pay particular attention to the power of the human body to restore lost parts or to readjust itself to their loss, to wound healing and to functional accommodation. The activity of formative factors exhibited by the ovum and embryo and by certain of the lower organisms capable of great regenerative power, have made these the favorite objects of study to those especially interested in the theoretical aspects of biology. Since I can assume that you are all more familiar than I with the surgical aspects of the subject I shall confine my remarks to certain biological aspects.

Experiments have shown that almost any part of the body of some of the unicellular organisms is capable, if it contains a part of the nucleus, of regenerating into a new and perfect individual. Other unicellular organisms have little such power. Small parts of the body of some worms have likewise the capacity of quickly restoring the lost form and becoming new and perfect individuals. Other worms have little or no power of this nature.

Thus also it has been found that a small portion of the fertilized ovum of some organisms is capable of development into a perfect individual, while a portion of an ovum of other animals is capable of giving rise merely to that part of the body into which under normal circumstances it would have developed.

These facts lead to the belief that formative factors are in some instances highly differentiated and localized even in the ovum, while in other instances the formative factors capable of giving rise to and maintaining entire individuals of specific form are to be found distributed widely throughout the body, even in adult organisms of some complexity.

While experiments on the mammalian ovum cannot readily be carried out, the occurrence of duplicate twins within a single set of membranes has led many to the belief that the human ovum, which

under normal conditions gives rise to a single individual, may, by some unknown conditions, occasionally be divided into two or more parts, each capable of differentiation into a complete individual. In such instances the two individuals are not only of the same sex but they are so nearly identical in form that the chief lines and ridges on the palms and soles are much more strikingly alike than is the case between ordinary brothers and sisters. H. H. Wilder, who has made a special study of this subject, has brought forward evidence to show that many monsters with duplicate parts are due to a similar differentiation of parts of an ovum incompletely separated.

In most vertebrates, in the later stages at least, embryonic development seems to be accompanied by a specific distribution of formative factors. When the tissues are formed each seems capable of giving rise merely to new tissues similar in character, and as the tissues become more and more highly differentiated the formative factors seem generally more and more restricted in scope. The simpler epithelial tissues, the connective tissues, the peripheral nerves and the smooth muscle retain through life a high regenerative capacity; voluntary muscle, heart muscle and the tissue of the central nervous system in the higher vertebrates at least, early lose more than a very slight regenerative capacity. The salivary glands and liver retain a high degree of regenerative capacity. The kidney early loses regenerative capacity, but it has great power of hypertrophy and of functional adaptation so that a small part of one kidney may perform the work commonly done by two whole kidneys.

The tailed amphibia among the vertebrates show the greatest capacity for regeneration. Not only can complex parts like an arm or leg, be restored, but the iris has been shown to have the power of giving rise to a crystalline lens although the latter during embryonic development normally comes from the ectoderm.

The interdependence of organs during embryonic development offers an interesting field for study. In general there seems to be a considerable power of independent development. Harrison, for instance, has shown that the peripheral musculature in the tadpole may be differentiated without the concurrent development of peripheral nerves. On the other hand, Lewis has clearly shown that the development of the lens in the tadpole is due to stimuli exerted by the contact of the optic vesicle with the ectoderm.

While the primary factors of development reside within the living protoplasm of an organism, our power to influence these factors can only be exerted from without. The means at our command are partly physical, partly chemical.

Light on the animal organisms seems to have little specific influence, although the rate of development of the eggs of some animals is faster in yellow and violet light than in red and green (Yung), and a strong white light injures developing eggs.

The ultra violet rays have a powerful burning effect on the skin and have been shown to have a specifically beneficial effect on lupus.

Radiant energy in the form of X-rays and the rays of radium have a powerful effect on most tissues. Schwartz has brought forward evidence to show that this is due to a specific effect on lecithin. That it is not due to specific action on the blood vessels I have been able to show by experiments in certain worms which contain no blood or blood vessels and yet are easily injured by exposure to the rays.

Although organisms will develop only within certain maximum and minimum limits of temperature heat has not been shown to have a specific effect on the formative factors further than to influence the rapidity of the process.

The most interesting experimental results have been obtained by chemical methods by altering the chemical and physical features of the medium surrounding an organ or bathing its tissues. Of these results among the most brilliant is Loeb's discovery of artificial parthenogenesis.

Another interesting line of work, on which I can only touch here, is that of tissue transplantation. Ribbert has shown that the substance of most glands except the kidney and liver can be transplanted into various vascular areas and live for a considerable period. The mammalian skin has been kept from 2 to 10 days in salt solution or from 7 to 22 days in a moist chamber, or a month in ascitic fluid, and then successfully grafted. The periosteum of a rabbit removed and transplanted 100 hours after death has been found to give rise to cartilage and bone. Wolff has found karyokinetic figures in a tumor 6 weeks after its removal from the body.

I have touched but lightly on a few aspects of modern anatomy, but I trust that I have said enough to show that the science to-day is a live and growing one and capable of great development along lines of scientific interest and practical importance. What organic structure is, what service it performs, what conditions give rise to it, will long be questions worthy of the most devoted study.

ORIGINAL ARTICLES.

"RADIO-ACTIVITY." THE THERAPEUTIC RESULT WE MAY EXPECT AT ITS PRESENT STAGE OF DEVELOPMENT.*

BY WM. SICKLES, M. D.,
MILWAUKEE.

So many members of this society possess one or more forms of apparatus necessary for the production of high frequency discharges, the ultra-violet rays, cathode and Roentgen rays, that we naturally have a legitimate interest in this subject.

During the past year, however, the scientific and practical aspects of the subject of the physics and therapeutics of radio-activity has become of keen interest to the medical world, owing principally to the reports of the wonderful properties of radium and its use in treating disease. Many of these reports, even in medical journals, were, considering the superficial data given and lack of scientific methods shown, plainly unreliable.

It seems, therefore, that a plain statement of the actual status of radio-activity at the present time is desirable, rather than to wait until some future time, when further observations of the use of the new force in the treatment of disease would allow of a more complete statement.

Medical writers in general are lately including under the term "radio-activity" not only the radiations from radio-active substances, but the X-ray and the ultra-violet ray as well. This is hardly a correct view to take even from a purely therapeutic standpoint, as there is a marked physical difference in the two classes of radiations. The "rays" derived from a Finsen lamp or an X-ray tube are now considered to be waves in the ether, disturbances similar to ordinary light, but consisting of wave lengths longer, shorter, or in a different direction from the ether waves of the visible spectrum.

The radiations from radio-active substances consist of rapidly moving material particles. Some of these particles have only slight penetrative power, being absorbed during their passage through a small fraction of an inch of ordinary air; others have power of great

*Read before the 58th Annual Meeting of the State Medical Society of Wisconsin, Milwaukee, June 24, 1904.

penetration, being able to pass through the human body, thick boards, walls and even heavy sheets of iron. This class of rays is exemplified by the cathode ray, which, however, has but slight penetrative power. This ray occurs within an X-ray tube and suggests a very near relation between these two classes of radiations, some such relation perhaps as exists between electricity and magnetism.

When an X-ray tube, if the vacuum is not too high, is in action, we have a neat and interesting illustration of both classes of radioactivity. Inside of the tube, if the room is slightly darkened, a narrow, bluish streak or band, can be seen, reaching from the cathode to the target in the center of the tube. This is the cathode ray, and it can be easily demonstrated to consist of actual particles of matter repelled with great speed from the cathode or negative pole. Crooks devised a very pretty experiment to show the nature of this ray, by supporting a small vane in the path of the ray. The bombardment of the vane by the moving particles of the ray causes it to revolve with great rapidity. Although of but slight penetrative power the cathode ray will affect a photographic plate and be deflected by a magnet. It can also be shown that the individual particles carry electric charges.

Proceeding from the target and passing through the tube to the *outside* we have of course the X-ray, an example of radiation supposed to be produced by the intense disturbances in the ether when the rapidly moving bodies of the cathode ray are arrested by the target inside the tube.

It was in 1896 that Becquerel discovered that uranium and its salts possessed the power of giving out rays, which like Roentgen and cathode rays, affect a photographic plate, and make the gas through which they pass a conductor of electricity. In 1898 Schmidt discovered that thorium possessed similar properties; since then it has been shown that these radio-active substances are not confined to rare minerals, it having lately been shown that many specimens of water from deep wells contain a radio-active gas, and a similar gas has been found in the soil, in new fallen rain and dew. Incandescent metals also possess the same property.

The discoveries of Becquerel and Schmidt led M. and Mme. Curie, who first introduced the terms "radio-active" and "radio-activity," to carefully examine a large number of minerals containing uranium. They found that some of these, notably some specimens of pitch-blende, were more radio-active than equal volumes of pure uranium, although only a fraction of the specimens consisted of uranium. This indicated that the mineral contained some substance or sub-

stances much more active than uranium itself, and a systematic attempt was made to isolate these substances. After a long investigation conducted with marvelous skill and perseverance, they succeeded in establishing the existence of these new radio-active metals in pitchblende: radium associated with the barium in the mineral and closely resembling it in chemical properties, polonium associated with the bismuth, and actinium with the thorium. They succeeded in isolating the first of these and determined its atomic weight to be 225. Its spectrum has been discovered and examined by others. Neither polonium nor actinium has as yet been isolated, but the activity of polonium has been found to be fugitive, dying away in a few months. Rutherford found that the radiation from uranium (and it has subsequently been found that the same is true for thorium and radium) is made up of three distinct types of rays, which he calls the alpha, beta and gamma rays. The alpha radiation is very easily absorbed, being unable to penetrate more than a few millimeters of air at atmospheric pressure; the beta ray is more penetrating, while the gamma ray is the most penetrating of all.

Mme. Curie's latest thesis is devoted to the consideration of these three varieties of radium rays. She shows how they may be separated and illustrates her demonstration with a simple diagram. The alpha ray, which constitutes the largest part of the radiation, can be deflected by a magnet, as is also the case with the beta rays, which are much more widely deflected and in an opposite direction, but in the same direction as the cathode rays. A magnetic field has no effect on the gamma rays, the most penetrating of the radium rays. Williams has recently shown by some convincing experiments that the beta ray, which deflects in the same direction as the cathode ray, is analogous to it, and that the gamma ray corresponds to the X-ray; also that the gamma ray can be produced by separating the rays by means of magnets and allowing the beta ray to strike a solid object, as the cathode ray does inside of an X-ray tube.

Pure radium being unstable in air, the salts only, usually the chloride or the bromide, are used. The amount of radio-activity of a given specimen of a radium salt is determined by reference to crude uranium as a unit. For instance, it is said that a given specimen has a radio-activity of 300 or 10,000. This indicates that the specimen is 300 or 10,000 times more radio-active than uranium. The finest specimens of radium-chloride have a radio-activity of about 1,800,000. Most of the radium of such power has been reserved by the Curies themselves for their own purposes. The strength of a given specimen of a radium salt can be crudely measured by its ability to penetrate

sheet iron. The finest quality will easily penetrate a mass of iron over two inches thick.

In addition to the properties of radium already mentioned, it is interesting to notice that it maintains a temperature above the surrounding air, is phosphorescent, will excite fluorescence in certain chemicals, as barium-platino-cyanide, and produces both harmful and beneficial effects on animal tissues, besides having the power of causing induced radio-activity, or better, what Rutherford calls "imparted radio-activity." This imparted radio-activity is caused by what is thought to be a gas or emanation, as objects which have been in the neighborhood of a specimen of radium-salts for a certain time acquire the property of giving out rays for a while, even after their removal from the presence of the radium. It has been found that rubber, celluloid, etc., retain this property longer than other substances, and Williams has suggested that this fact may subsequently be useful in the treatment of disease.

The phenomena of radio-activity thus briefly outlined are believed to be due to changes going on within the atoms of the radio-active substances. If this is so then chemists must speedily face the problem of the constitution of matter. It can easily be shown that the cathode ray and the rays from radio-active bodies consist of actual, material bodies moving at high speed in one direction. These bodies have been named corpuscles. It can also be shown that whether we produce the corpuscles by cathode rays, or from radium, or from incandescent metals, whatever metals or gases are present, we always get the same kind of corpuscles, similar in all respects, but obtained from very different agents and materials. And since the mass of the corpuscle is less than that of any known atom, we see that the corpuscle must be a constituent of the atom of many different substances —in fact, that the atoms of these substances must have something in common, an idea that has in various forms been advanced by more than one chemist in the past one hundred years.

To one who followed the development of this subject during the past year, it seemed at one time that it was peculiarly easy for the American physicians to procure samples of this rare salt. Reports were plentiful, from every section of the country, alleging "great improvement" in some malignant case after a few exposures.

Most of this so-called "radium" was useless therapeutically, was indeed refuse from the manufacture of real radium, or was impure uranium salts which possess the property of phosphorescence and have a low radio-activity, from nothing up to 200 or 300. The same is true of most of the specimens exhibited in museums, by lecturers in different cities, and so forth.

Most of the cases treated in this country, have been with a radio-active salt of from 300 to 7,000; but two or three small amounts of radium bromide of 50 milligrams each have been brought to America, that is, of the highest activity, 1,600,000 to 1,800,000. This quality only, (higher if possible, certainly nothing lower) should be used for therapeutic experiments.

Apparently the field of diagnosis and prognosis is in no danger of being invaded by the radium rays. Hence the medical use of this agent will be confined to therapeutics, as it cannot be used, like the X-ray, to diagnose fractures, show diseased conditions of bones, and locate calculi wherever they may occur in the body. This is due to the fact that skiagraphs made by radium do not show good differentiation of tissue. This fault cannot be overcome by using larger amounts of the salt, in which case the resulting skiagraphs show poor definition, owing to the more diffused area at the origin of the rays.

Davidson of London, Knecht of Vienna, and one or two others in America, have had the opportunity of treating a considerable number of cases with the more powerful radium salts. This treatment is simple and seems to require much the same precautions against burning and judgment in length of exposure, as are required in the successful use of the X-ray therapeutically.

The radium salt is enclosed in a lead capsule, with a light celluloid or mica cap through which the rays are allowed to pass. The capsule is attached to a handle about a foot in length. The usual length of exposure is from one-half minute to three minutes, and from direct contact with the part, to three inches away.

From some 200 cases reported from reliable sources, it can be stated that the radium rays are useful in the treatment of a variety of skin diseases and superficial new growths. A number of cases of carcinoma of the breast and cervix are included in the cases reported. These are noted as improved only. A large number of cases of rodent ulcer, small epitheliomas, lupus, psoriasis, acne, etc., were cured, apparently perfectly.

Considerable time must elapse before it will be possible to give a definite idea of the permanent place destined to be occupied by radium in the therapeutic field. Except perhaps for a certain class of cases, as in small epidermoid carcinoma in the mouth or other cavity of the body, which would not be readily accessible to the X-ray, the superiority, at this time, belongs undoubtedly to the latter.

CLINICAL LECTURE.

BY DANIEL N. EISENDRATH, M. D.,

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CHICAGO.

The two patients whom I present to you to-day, and which have been examined by a number of the class, afford us an opportunity to make a differential diagnosis between two of the most frequent swellings which can occur in the scrotum. These cases have been correctly diagnosed by two of the members of the class, the patient on the left as an inguinal hernia, and the one upon your right as a hydrocele of the tunica vaginalis testis. In order to take this up a little more systematically, I will place in parallel columns the most frequent points in the differential diagnosis between these two rather common conditions.

1. HERNIA.—The swelling in the scrotum is continuous with one situated in the inguinal canal, so that the finger can follow it up through the external abdominal ring into the canal proper.

HYDROCELE.—Except in cases of so-called congenital hydrocele, the tumor is found to extend only as far as the external abdominal ring, but not through it into the inguinal canal, so that if the cord is held between the thumb and fingers of one hand, the entire swelling is found to be distal to them in the scrotum.

In cases of congenital hydrocele that portion of the original pouch of peritoneum which precedes the descent of the testis has not been closed, so that a tumor is present in the scrotum, which extends, similarly to that of a hernia, along the inguinal canal as far as the internal abdominal ring, so that it is exceedingly difficult to make a differential diagnosis by means of this first point from an inguinal hernia. In such cases the other symptoms given under Nos. 2 to 5 inclusive must aid us in the differential diagnosis.

2. In a *hernia* similar to the one in this patient, in which there is a normal descent of the testis, there is a distinct impulse on coughing, and the contents of the hernia, usually intestines or omentum, can be felt to be forced into the hernial sac, extending down as far as the testis. In cases of non-descent of the testis, especially in those in which the testis has been arrested in its descent in the inguinal canal, or just external to it, a firm body is felt in the canal, and the impulse of the hernia pushes it down.

There is no impulse on coughing in a *hydrocele,* such as the one which exists in this patient, that is, of the tunica vaginalis testis. One may, however, encounter cases of a so-called hydrocele of a hernial sac, in which there is a distinct impulse on coughing, due to the fact that there is a variable quantity of fluid present in an open tunica vaginalis, in which there is a co-existing congenital hernia. In such cases the differential diagnosis of a hydrocele from a hernia is practically impossible, as both conditions are present.

3. On percussion, a *hernia,* if it contains intestine, is tympanitic; if it contains omentum, there is distinct dullness.

A *hydrocele,* whether of the tunica vaginalis testis or of the cord, is always dull upon percussion.

4. Reducibility. The contents of a *hernia* is always reducible, and if it consists of intestines only, can be returned to the abdominal cavity with the characteristic gurgle. One encounters, however, from time to time cases of so-called irreducible herniæ, in which the contents (most frequently omentum) has become adherent to the hernial sac, so that it is not reducible. Under these circumstances, one can depend upon the sign given under No. 1, that is, the fact that the tumor continues into the inguinal canal. and does not stop, as in a hydrocele, at the external abdominal ring.

The contents of a *hydrocele* is never reducible, unless one of two conditions is present: (a) A hydrocele of a congenital hernia, as described above, under No. 2; or (b) a hydrocele in which the fluid is not only present in the tunica vaginalis testis, but through a communication with the remnants of the peritoneum covering the cord into the inguinal canal some of the fluid can be pushed into this latter portion of the sac.

5. With the transillumination test the contents of a *hernia* shows no translucency. This test is applied in the following manner: The patient, while lying upon the back, is asked to raise the scrotum, or it may be raised by an assistant, and a candle or electric light is placed upon the side distal to that upon which the operator stands. By shading his eyes with his hand, or through the use of a roll of paper, one can see distinctly that the light is transmitted through the scrotal mass in cases of hydrocele.

Transillumination test shows distinct translucency in cases of *hydrocele.* Occasionally one will encounter cases of old hydrocele, in which either on account of repeated tappings or owing to some inflammatory condition of the tunica vaginalis there is great thickening, and at times even calcareous formations in the wall of the hydrocele, so that this transillumination test will fail under these circumstances.

6. In some textbooks one is advised to make an exploratory puncture of the scrotal tumor, in order to make a differential diagnosis between a *hernia* and a *hydrocele*, but this is a most dangerous procedure, and I cannot too strongly advise against it. In almost every case it is possible to make a differential diagnosis without the use of this measure.

THE COMPLETE DIAGNOSIS.*

By E. EVANS, M. D.,
LA CROSSE.

I wish first to thank you for the honor done me in asking me to address you to-day. I recognize fully that not in the knowledge imparted or in the learning displayed are addresses before our societies of value, but rather in the stimulus we convey one to another, and the suggestions given for future study and investigation. I feel then that I need offer no apology this afternoon if I succeed in suggesting some new line of thought, or some more extensive reading, or in impressing upon you the absolute necessity of the most careful examination of your patient, if you would escape gross mistakes in diagnosis and secure yourselves against humiliating discomfiture, and your patient against maltreatment which must inevitably follow errors in diagnosis. It is a trite saying that we should "treat the patient and not the disease"—one, however, more often honored in its breach than in its observance. For in the course of one short week how many patients do we see whom we examine carelessly and imperfectly, discover the chief complaint or morbid lesion and prescribe for *that*—utterly neglecting the patient as a whole.

It is to draw your attention to this too common oversight on the part of all of us that I have chosen for my subject the title, "The Complete Diagnosis."

The chief hindrances, I take it, to our making a complete diagnosis are:

(1) Lack of preliminary and proper professional training. It is necessary to bring the logical and trained mind to the investigation of such complex problems as present themselves in medicine.

*Read before the Crawford County Medical Society, Prairie du Chien, Nov. 22, 1904.

(2) Lax habits of thought and observation engendered very often by our environments, and

(3) Inadequate compensation for our services.

With the first of these we need not deal—"that which we are, we are." We cannot go back to our boyhood days and secure a college education, nor can we help it if our professional training was pursued in an inferior medical school. But we can rise superior to our environments and we can train our mind and hand and eye; we can by careful observation, and logical systematic analysis and recording of the same, become proficient in our profession, wherever we are located. Dr. James Stewart, Professor of Medicine and Clinical Medicine at McGill University Medical School, and Physician-in-Chief to the Royal Victoria Hospital, Montreal, came there from a cross-roads country village. Koch pursued his epoch making investigations on consumption in a small town and in obscurity. The story of the struggles of Dr. Trudeau of Saranac Lake reads like a fairy tale; and one of the greatest surgical clinics in the world to-day is to be found in a small town of 6,000. We must work, work hard, work always.

One of the greatest aids in keeping us abreast of the times, and our best stimulus to do good work, is found in regular attendance on, and enthusiastic support of, our medical societies, and especially of our county society. Strange, too, it is the busy man who is the regular attendant.

Inadequate compensation we should consider from the altruistic, not the individual standpoint. Where the doctor is not adequately, indeed liberally supported, the community invariably and inevitably suffers. The scope of medicine is now so broad, the subdivisions so numerous, its progress so rapid, that the doctor must have a large library and the leisure to read it, and he must from time to time and frequently do post-graduate work. When such is not the case, where from lack of means or from any cause the doctor is not abreast of the latest thought, he retrogrades and the community suffers. I have been running an automobile for the past few months, *i. e.*, when it will go. I have tried to do it without following the good advice of the salesman who said to me, "You must know your machine." I have learned the truth of this by neglect of the advice; and learned also that men who repair autos are like poor doctors—they don't diagnose their case—they don't know their patient.

To know your patient implies much. It implies first of all a good knowledge of anatomy and physiology—not as we learned these 20 or 10 or even 5 years ago, but as these fundamental subjects are known to-day. So we must read text books as well as journals. Read

Barker's work on the nervous system, or even study his illustrations with their legends, and realize how primitive was our student knowledge.

A recent work of Sajous entitled "The Internal Secretions and The Practice of Medicine," devotes 361 pages to the adrenals and their relation to the other ductless glands, the circulation and various organs of the body. Nor is it a theoretical dissertation, but based on observed facts, clinical records and experimental study, and all of very great medical importance.

We must know our anatomy—so let us frequently review it. We must know our physiology; we must know the functions of the various organs, their correlation to each other, the effects of hyper- and hypo-activity—*viz.*, the stomach secretion, the thyroid gland, the pituitary body, and the like. But after all, we commit our gravest mistakes by the sin of omission—the omission of applying what we do know—the omission of a careful inspection and examination of our patients, which includes the careful taking of a personal and family history. Look back on our own experience in the frequent grippe epidemics since '89-'90, what a burden, not its own, has the bacillus of Pfeiffer been made to bear? Many a case of tuberculosis has been let go beyond the early curable stage, because the cough and malaise, and so forth, were attributed to the prevailing malady. How much is in a name when we are careless or lazy. In the same way in earlier times malaria covered a multitude of ignorance and many a poor wretch with six feet of earth.

We must systematically and consistently examine the whole patient, system after system, organ after organ, function after function, till the whole body is gone over. Never omit, *e. g.*, vision, *always* examine the urine, and carefully examine the heart and general circulation. Blood examination is very important. It is surprising how often you will find arterio-sclerosis, the etiologic factor in an obscure indigestion or "torpid liver," or headache or other symptoms too often treated empirically. Then always keep a record of your cases. Take a case of pneumonia for instance—usually very easy to diagnose—but the consolidated lung may be a trivial matter while the condition of the heart and arteries, the kidneys, the age or the past history of the patient may be the all important factor in prognosis. Consider a case of tuberculous adenitis of the neck. What shall we do with it? Operate or not? If yes, how operate? Without entering into the question of operation, note the great number of interesting queries that arise. Why does 90 per cent. of tuberculous adenitis occur in the neck? Why is it that while a tuberculous ten-

dency or diathesis can be traced in one-third of the cases (and this would be expected to operate most markedly in the first decade, when too the exposure to infection through teeth and tonsils and skin and surroundings is most pronounced and the resistance least owing to lymphatic hyperplasia) only 9.5 per cent. of such adenitis occurs in the first decade, while 44.4 per cent. occurs in the third? If some 50 per cent. of permanent cures occur after excision, why is there failure in the other half; and would sufficiently early operation cure all? Here enters strongly the question of the point of primary infection. Was the primary infection in the bronchial glands, and the neck infection an ascending one? If so, we would expect operation to fail. Again, as in a recent case of mine where the glands of the posterior triangle were affected, especially just above the clavicle, and there was a slight cough, it was of prognostic importance to decide if the disease in the glands spread upward from a primarily affected apex pleurisy, or if the mass of glands was secondarily affecting the apex of the lung and causing the cough. And so we may cite example after example to show the importance of making as complete and rational a diagnosis as possible. A case of Dr. Mecum's, operated on by me some time ago, illustrates how easy it is to stop short of a complete diagnosis, because of lack of sufficient care in prosecuting the enquiry to the end by careful physical examination. A lady had a distinct history of gall stone colics. Examination showed a pronounced tumor of the right side, a decided tenderness at Robson's point with dulness extending quite low down in the right side. A diagnosis of gall stones in an enlarged liver, displaced downward, was made and the patient operated upon. Gall stones were found and removed. The liver was normal in size and position, and the tumor was found to be a 9 lb. retroperitoneal lipoma. But the point I wish to bring out is this: we found at operation the ascending colon lying partly in front of the tumor. Here, of course, we should have found a tympanitic note over the tumor which would exclude the liver and prevent the mistake. Another case illustrative of failure to pursue the investigation far enough to make a rational diagnosis (and where the mistake was not mine) is the following: a woman was found sitting in bed and struggling for breath—evident asthma—rhonchi and dry râles all over both lungs—heart fast, and cardiac impulse diffuse and marked on inspection, no murmurs. Feet swollen slightly, no sleep, urine loaded with albumen, no casts, 8 months' pregnant—an evident case of albuminuria of pregnancy, yet this case was being treated for asthma.

Two recent cases of mine illustrate very well the danger of diagnosing an evident pronounced lesion and overlooking a more obscure but more serious condition.

A lady came to St. Francis Hospital needing some surgical care about the genital organs, but the patient seemed rather dull and said she had grown so only of late. She suffered from cold extremities, perspired little, hair dry and becoming thin and broken, a somewhat general but not at all marked subcutaneous infiltration, giving to the face an expressionless cast. The diagnosis of a mild myxedema was made, and thyroid extract improved the case very markedly in a short time. Of course, she continues the extract in small doses. Shortly after this, a child was brought to the hospital for rectal prolapse; but the examination of the child led to a diagnosis of cretinism as well.

There is such a thing as fads in medicine, and just now appendicitis is the long suit of the careless diagnostician and the embryo surgeon, and I am quite sure appendicitis is often diagnosed and appendectomy done where the appendix is normal, a ludicrous, though pathetic example of this occurred recently in our city.

Bring a frankly open mind to every case, beware of preconceived ideas—they are pitfalls into which all of us often fall. For three years a patient stuck faithfully to me—too faithfully I thought, for I believed him a neurasthenic; he had pain in his back, sexual disturbances, inability to do much work, gave a history of having passed some blood in the urine, with some colics, but I never found the urine abnormal when he visited me. And urine sent after the attacks he told about showed nothing or only a few blood cells, yet final operation revealed a small calculus in the pelvis of the right kidney. I had grievously wronged this young man for over two years. Always seek for a physical cause for pain and always keep strict account of your own mental attitude.

I have cited these cases—perhaps too many and at too great length—to endeavor to bring home to us the importance of making a complete diagnosis as a preliminary to successful treatment. The prime function of the doctor is the preservation of health and the cure of disease. For this purpose we are tolerated and compensated. If, while doing this, we are also the cleanest men physically and morally in our community, the most honest men, the most progressive and learned men, we will be loved in life, and in death our memory will be cherished.

SOME ANATOMICAL ANOMALIES ENCOUNTERED IN ABDOMINAL OPERATIONS.*

REPORTS OF FOUR CASES WITH CLINICAL DATA AND COMMENT.

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MILWAUKEE.

In the present paper I purpose to put on record four cases of anatomical anomalies, which, on account of their rarity and the clinical phenomena associated with them, seem to me of sufficient interest to warrant my bringing them to the attention of the profession.

Unusual pathologic conditions neither surprise nor disconcert the experienced surgeon, as he expects to find something new or never before encountered in almost every case of operation; now and then, however, conditions are found the very rarity and intrinsic interest of which call for their being put on record; to this class belong the cases here recorded.

Case 1. HORSESHOE KIDNEY. As this condition is said to be found in one autopsy out of about 1100, one would almost expect to find it mentioned as having played a part in the difficulties of diagnosis, or as having complicated surgical work on the kidney. I have failed, however, to find it mentioned in either connection. In the following case it gave rise to considerable pre-operative doubt as to diagnosis; and a post-operative albuminuria was probably attributable to the repeated pressure and palpation to which the organ had been subjected.

Male, aged 34 years, farmer, a patient of Dr. Dollard, of Cascade. He has enjoyed good health until six or seven years ago, when he had an attack of acute appendicitis. Since that time he has suffered from several milder attacks of the same disease and now presents well marked local and general symptoms of chronic appendicitis. In addition to these symptoms, however, there was noticed an unusual fulness of the umbilical region, especially of that portion just above and to the left of the umbilicus. Palpation at this point gave a sense of increased resistance, and indistinctly of a deepseated immovable tumor, with slight tenderness on pressure.

The operation was therefore planned with a view to removing the appendix and exploring the upper abdomen. An incision 4 to 5 inches long was made through the outer border of the right rectus muscle, its upper portion corresponding to the level of the umbilicus.

*Read before the Milwaukee Medical Society, Feb. 28, 1905.

By introducing the hand, I was enabled to make a satisfactory examination of the swelling and found it to extend across the entire posterior wall of the abdomen, from one lumbar region to the other, behind the intestines and in front of the large vessels. It had the consistence of normal kidney, was distinctly lobulated and immovable. Exploration of the fossa ordinarily occupied by the right kidney showed an absence of the fulness and resistance normally encountered in that locality. These findings left no doubt as to the nature of the swelling, *viz.*, that it was due to the presence of the malformation known as "horseshoe kidney." Nothing abnormal had been found in the urine prior to the operation, but for several weeks subsequently it contained a small amount of albumen. As the anesthesia was brief, I attributed this albuminuria to the pressure and palpation to which the organ was subjected during the repeated examinations, in other words, considered it a "palpation albuminuria." It disappeared within a few weeks, and the man has since then been in perfect health.

Case 2. Meckel's Diverticulum, with Permanent Narrowing and Tonic Spasm of Part of the Small and Large Intestine. Male, aged 17 years, a patient of Dr. M. M. Spitz, of Milwaukee, was operated upon for obstruction of the bowels at the Milwaukee Hospital, March 26, 1904. With a history pointing rather to mechanical obstruction, the symptoms at the time of operation led to a strong suspicion of appendicitis; there was tenderness with increased resistance and fulness on the right side, and slight elevation of temperature and pulse. The bowel obstruction was complete both as to feces and gas, and during the last day before operation was accompanied by frequent vomiting at times of a fecal nature—a condition rarely found in appendicitis unless associated with some form of mechanical obstruction. Operation was promptly consented to, and it was found that there was no disease of the appendix, but that the obstruction was due to an inflammatory exudate and adhesions the contractions of which had brought about an almost complete closure of the ileum at a point 30 to 40 inches above the ileo-cecal junction; there the ileum was joined by a Meckel's diverticulum, seven or eight inches in length, the blind end or tip of which was attached to the parietal peritoneum at the right border of the umbilicus. The seat of the adhesions was immediately to the left of the ascending colon, slightly below the level of the umbilicus. These conditions fully explained the rather mixed and obscure symptom complex above related; they do not, however, account for the occurrence at this point of the inflammatory conditions, as the diverticulum showed no evidence of present or past disease and was not directly instrumental in bringing about the obstruction. What gave to this case its special interest, however, was not the diverticulum nor the obstruction, but the condition of the intestine distal or efferent to the constriction. On opening the abdomen, the ileum from the point of attachment of the diverticulum to the cecum, the diverticulum itself, the cecum and the colon so far as it could be inspected, were found to be in a state of tonic contraction; the diverticulum and lower portion of the ileum were perfectly empty

and uniformly contracted into a soft cord-like structure, one-fourth to three-eighths of an inch in diameter, so that on first glance the ileum was taken for a somewhat enlarged appendix. Proximal to the constriction the small intestine was deeply congested and greatly distended. The cecum and colon presented the same condition of firm uniform contraction, so that they bore but little resemblance to the usual appearance of these structures; some fecal masses contained in the colon were enclosed in projecting pockets and immovably held in place.

On completing the work necessary for the relief of the obstruction and the removal of the diverticulum, it was noticed that the contraction of the intestine had disappeared, but that the small intestine, instead of returning to its normal size when fluid and gas were forced into it from above, became distended to not more than one-third to one-half its normal caliber. This decrease in size was so uniform throughout the length of the affected intestine, that it was strongly suggestive of a congenital anomaly. Assuming this, it would not be difficult to understand how a series of pathological changes might have been set in action at the junction of the normal ileum with the diverticulum and the narrow portion, and the obstruction thus brought about at this particular point. My expectation that this narrowed portion of intestine would again serve its function was not fulfilled; symptoms of ileus continued unabated, the patient's general condition forbade further operative procedures, and he died two days after operation. A primary enterectomy, resecting the entire length of narrowed intestine, an entero-colostomy establishing an anastomosis between the normal ileum and the ascending colon, or—if the general condition had not permitted either of these—an enterostomy, might have led to a more favorable outcome. A short narrowing of the same caliber would no doubt have been overcome by the pressure from above; but the case conveys the lesson that a narrowing of considerable length, though of moderate degree, is not to be trusted.

Case 3. Male, aged 28 years, a patient of Dr. M. M. Spitz, of Milwaukee, was employed in an express office and frequently lifted heavy weights. He enjoyed good health until a week ago, when he began to suffer with intermittent abdominal pain of a general colicky character, but remained at work for five days more, when, on retiring, he was taken with vomiting and increasingly severe pain. During the following two days he remained in bed, and vomited only once after taking a dose of Epsom salts; the pain remained intermittent and increased somewhat in severity. All attempts to bring about a movement of the bowels proved absolutely futile from the time he took to his bed; after the lower bowel had been cleansed by an enema not the slightest passage of feces or gas could be brought about.

The patient was a thin muscular individual, general nutrition and circulation good, skin and sclera clear, expression not indicating severe suffering or grave disease. Temp. 100° F., pulse 80 to 84. Up to the time of my examination the temperature had not been found above normal. Abdomen: Moderate general distension, decid-

edly more pronounced in the right side, especially below and to the right of the umbilicus. Tympanitic resonance all over, also most marked in the right iliac region. Slight deep-seated tenderness in the same region, with slight rigidity of the muscles on the right side. Thus, as in the preceding case, we had here a history pointing to mechanical obstruction, while the present conditions favored the diagnosis of appendicitis. Immediate operation was advised, consented to, and performed at the Milwaukee Hospital, Jan. 28, 1905. Incision was made through the outer border of the right rectus muscle. No adhesions were found between the parietal peritoneum and the contents of the abdominal cavity. On opening the abdomen, however, instead of coming at once upon the omentum or intestines, I found myself confronted by what appeared to be a tense cyst or tumor, but really consisted of a smooth bluish membrane, continuous with the parietal peritoneum on both sides and below, and enclosing every portion of the intestine except the lower portion of the sigmoid and rectum. The examining hand could be passed between this membranous wall and the urinary bladder below, as well as between the lower border of the liver and the membrane above, but nothing of either omentum or intestine could be seen or felt while the membrane remained intact. Further examination now disclosed the presence of fluid and coils of intestine within the membrane; this was incised, and I now found myself where one ordinarily expects to be on opening the parietal peritoneum, face to face with the intestines. No evidence of disease was found in the immediate vicinity of the appendix. The colon and lower portion of the ileum were greatly distended, the former to fully three times its normal caliber; their walls were congested but free from fibrinous deposits; considerable sero-sanguinous fluid was found between the coils of intestine. The dilatation of the entire colon pointed to the seat of obstruction as being located low down in the large intestine; such proved to be the case, as the cause of obstruction was found in the form of a compressing band, formed by the lower border of the membrane where it left the pelvic wall to cross over the rectum or lower sigmoid. In order to reach and safely relieve this constriction, it was necessary to make an incision through the left rectus muscle, the membrane was opened on this side just as on the right, a strip of gauze passed under the band so as to draw it partly into view, a double ligature applied and the band divided. Careful examination, rendered difficult by the very long mesentery and the distended condition of the bowels, showed that no further obstruction existed. The longitudinal strip of membrane remaining between the two incisions was also doubly ligated, cut across, and dropped.

Before closing the abdomen I made a colotomy for the purpose of relieving the excessive distension and to enable the intestine to regain its muscular tone. In the light of subsequent events I believe this to have been almost essential to recovery, for in spite of the evacuation at this time of a large amount of liquid feces and gas, and free movements of the bowels on the following day, considerable distension of the colon could be noticed for a number of days afterwards.

The small colotomy wound was closed with a silk purse-string suture. The appendix, which was found very long, and somewhat thick and club-shaped, but free from adhesions and apparently healthy, was "incidentally" removed. The abdomen was closed without drainage. The patient's bowels moved freely on the day following the operation and there was no further trouble in keeping them regulated. Convalescence was delayed, owing to an atypical pneumonia and infection of the wound in the right side, but the patient was able to leave the hospital after about four weeks, practically well.

The origin and nature of the anomalous membrane in this case is a matter difficult to explain. It should be mentioned that not a trace of normal omentum, nor a trace of intra-abdominal fat was found during the operation; also that the subcutaneous cellular tissue or superficial fascia was totally devoid of the usual adipose element. I therefore favor the opinion that the membrane represented an anomalous greater omentum, very thin, long and wide, totally devoid of fat, its margin throughout coalesced with the parietal peritoneum, except at the point where it had to form an arch to give exit to the descending portion of the large intestine, at which point it became folded or thickened sufficiently to give rise to gradual and partial obstruction, and finally to complete shutting off of the lumen of the bowel.

Case 4. TRANSPOSITION OF THE VISCERA, OR SITUS TRANSVERSUS. This case was encountered, not in the clinic, but during an operative course on the cadaver, under Carl Maydl, in 1885 or 1886. I mention it to show what symptomatic possibilities, diagnostic difficulties and operative perplexities may present themselves to the clinician confronted with this anomaly in an emergency, or failing to recognize the true state of things. In the case here referred to, the complete transposition of all the abdominal and thoracic viscera, in a man who had died of chronic pulmonary tuberculosis, was not detected until, with a fellow student, I attempted to perform a left iliac colostomy, when to our surprise I drew out the cecum and appendix. The case was referred to the late Prof. Kundrat, then professor of pathology at the University of Vienna, who demonstrated it to his class as a case of complete situs transversus.

Kernig's Symptom.—Lewin (*Wratsch*, No. 38, 1904) found Kernig's symptom present in 21 out of 29 cases of meningitis. Kernig's symptom consists in the marked resistance to passive knee-extension while in the sitting posture, or, if in the horizontal position, to extension of the leg when the thigh is perpendicular to the trunk.—(B. S.)

SOME REMARKS ON PNEUMONIA.*

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It is not within the scope of this paper to discuss the merits or demerits of the micrococcus lanceolatus of Fraenkel, as a direct causative factor in the production of lobar pneumonia; nor to deny that these and various other bacteria and other poisons located in the system, operate as complicating and disintegrating factors after the disease is once under way; I believe this latter is true. I simply wish to call attention to a few points in regard to the causes, diagnosis, treatment, and prognosis of the disease.

I believe that the most potent cause of pneumonia in all its forms is a sudden chilling of the surface of the body. This produces a shock to the nervous system which controls the calibre of the arterioles. The vasoconstrictor nerves which preside over the nonstriated muscle fibres of the small arteries in the surface of the body receive the brunt of the shock. The vessels are constricted, and the whole surface of the body is blanched. The vessels in the internal organs are not affected to anything like the same degree, and as a consequence the blood from the surface is thrown upon the internal organs, the arterioles supplying these organs are overwhelmed with the increased blood pressure, they dilate, blood stasis is produced, congestion ensues and inflammation is the result whether it be in the lungs, or in any other organ or tissue of the body. The vitality of the part is lowered, and it is when in this condition that the micrococci become active.

The diagnosis of a typical case of lobar pneumonia is not at all difficult as a rule, and a failure should never be recorded. Unfortunately, however, typical cases are now-a-days not the rule, rather the reverse is true. We must frequently dig our pneumonia cases out of all sorts of complicating conditions. The best of us may be led astray by a severe pain in the iliac region, or about the appendix, and it may be that the true nature of the case cannot be discovered before the second or third day of the disease, no matter how painstaking we are in our examination. A centrally located area of inflammation will often defy recognition until the characteristic "prune juice" expectoration gives us the "tip."

To avoid errors in an early diagnosis, a good stethoscope should be used: first, because it greatly exaggerates any slight deviation from

*Read before the St. Croix Co. Medical Society, March 1st, 1905.

the normal murmur, and second, because it is impossible to use it at all without getting down to the skin of the patient, and there is where we must get if we are to do our best work. Again, we must not content ourselves with an examination of the front part of the chest only. I believe I am safe in saying that not one pneumonia in ten can be detected by an examination of the front side of the chest. We must get at the back and sides. Then we must remember that lobar pneumonia is not the most fatal form of the disease. Statistics show that broncho-pneumonia has a much greater mortality than lobar pneumonia.

This, I believe, is accounted for by the fact that broncho-pneumonia is by far the most frequent complication of la grippe. How often we are called to the bedside of a patient only to find that the disease is almost beyond our reach, because the illness was supposed to be "only the grippe."

These are very fatal words. "Only the grippe" kills more people every day than any other disease except consumption. I firmly believe that la grippe adds at least 50 per cent. to the mortality of every diseased condition that it complicates. It has forced us to entirely and radically change our plans of treatment of almost every disease. We have been compelled to abandon almost all treatment that is at all depleting in its nature, and to resort to supporting measures early.

Treatment.—I believe that the use of the cold bath, as recommended and practiced in some quarters, cannot be too strongly condemned. It is illogical and pernicious. If it is used to reduce the temperature of the inflamed tissues low enough to destroy the pneumococcus, or to render it inert until the crisis of the disease is passed, the disease will not be likely to progress to a crisis. If it is used to control temperature, it does so on the surface at the expense of the vital centers, and destroys the safety valve of the physician. Only one condition can I see in which it is desirable, and that is hyperpyrexia—when the body bath is begun at about the temperature of the body and gradually lowered. Even then, I believe it to be an heroic, not to say desperate measure, though it may be indicated and warranted by the desperately high temperature.

A safe plan of treatment is as follows: When the first sharp pain comes, meet it with a large mustard plaster, large enough to cover the whole side from the spine to the sternum. Leave it on only long enough to produce a bright blush. It will require only a few moments if the plaster is properly made, and that means made of pure mustard and clear water. It is a wanton waste of raw material, and defeats the very object you wish to obtain, to mix flour, white

of egg or any other material in a mustard plaster. After spreading the plaster, place a layer of cheese cloth over it to prevent it from sticking to the patient's skin. When it has produced the desired blush, remove it at once. It has done all the good it can, and will only do harm if it remains longer. As soon as the blush has disappeared, it can be reapplied, and this can be repeated as many times as required; then, when we are through with it, the skin will be in perfect condition to receive either a hot poultice, or an oiled silk and cotton wadding jacket. The object sought is to keep the bloodvessels on the surface of the body well dilated.

If the case is one of uncomplicated lobar pneumonia, and is seen within a few (12 to 24) hours after the initial chill, it can almost certainly be aborted within the next 12 to 24 hours by the administration of 15 to 20 drops of the fluid extract of ergot every hour or two until symptoms of ergotism are produced. It will do no harm, as half an ounce of whisky will antidote this, and the patient will recover.

The diet should be mild and unstimulating, and not given too frequently, certainly not oftener than once in two or three hours, and not then if the patient turns against it. Nothing can be gained by forcing food into a stomach that rebels against it.

I will not pursue the subject of treatment further in this paper, as the later works on the practice of medicine deal exhaustively with the subject in all its phases, and the proper discrimination in choice of remedies for each individual case is largely a matter of judgment on the part of the physician.

Prognosis.—I believe we are warranted in saying that pneumonia in all its forms, as we find it in the pure air of the country districts, may be given a favorable prognosis, save when complicated with grippe. It is certainly much more fatal in the large cities, and this I cannot but believe due to the fact that the inhaled air is laden with all sorts of germs, which are blown from the streets with every gust of wind, guaranteeing to the unfortunate patient a mixed infection from the very outset.

In conclusion I wish to say that the assertions that "Pneumonia cannot be aborted except by large doses of mercury" (Delafield), and "We are powerless to do anything that will help pneumonia" (Bevan), are unwarrantably discouraging, and in this locality, certainly untrue.

GENERAL PRACTICE IN NORTHERN WISCONSIN.*

BY JOSEPH P. COX, M. D.,
SPOONER, WIS.

About one-sixth of the State Medical Society of Wisconsin is composed of men who have to deal with the peculiar conditions existing in Northern Wisconsin. During a residence there the past twenty long and eventful years, I have come to the conclusion that a general practice must be conducted on lines somewhat different from the practice in other localities. Here we have not only the butcher, banker and barber to treat, but in the early days of our practice we were introduced to that usual "prince of good fellows" known familiarly in the lumber regions as the River Pig, Water Hog, Camp Laverie, or Lumber Jack, who frequently presented himself in our "sanctum sanctorum" in a condition of "innocuous desuetude," together with his famous private game preserves, well stocked with that choicest, gamiest, most vindictive and persistent ward of the lumberman known throughout Northern Wisconsin as the "Great American Gray Back," or camp louse, and, Gentlemen, the Lumber Jack was not at all parsimonious or niggardly in the division or distribution of his festive game, the hunting and bagging of which would develop the strenuosity of the most strenuous.

Here we come in contact with diseases and conditions which must be met with procedures compatible with the vocations and surroundings of our patients. During the early days of our practice, asepsis and antiseptics, that priceless boon to the profession to-day, was an almost unknown quantity. Surgical operations of both a capital and minor nature were a daily occurrence, and the surgeon visiting a case in the lumber camps of those days was fortunate indeed if he reached his victim before the case had taken on a condition of septic fever. Wounds in my early experience in this locality, were sometimes dressed with old socks. I have seen compound comminuted fractures dressed with ox manure and deer thongs. A case in point: On Jan. 18, 1888, I was called to the home of Shabogesic, an Indian logger on the Court Oreilles Reservation, to attend his son who had suffered a compound, comminuted and badly lacerated fracture of the lower third of the thigh. My professional brother, Dr. Neweosh, the great Indian Medicine Man of the tribe, who is said by the natives to have prac-

*Read at the 58th Annual Meeting of the State Medical Society of Wisconsin, Milwaukee, June 24, 1904.

ticed his profession successfully in that locality during the greater part of the last century, was in attendance, but gracefully turned the case over to me. At this time there seemed to be no difference of opinion in the modus operandi of the case. Chief Neweosh's opinion was presented (very logically I suppose) in his own native Chippewa Indian tongue, while my argument was made in the ordinary every day North Wisconsin English. The wounded leg was washed with soap suds and bi-chloride and the bony structure approximated. Seven catgut sutures held the skin and muscles in place and the patient was placed on an impromptu fracture bed. Counter-extension was made on the end of the bed by a stout bed cord from which was suspended a sack containing ten pounds of rock as an extension weight. After laboring with my patient for two hours I finally left him in charge of one of the bungi anighatas or female nurses of the tribe, with instructions to keep the leg in its quiet, fixed position until I returned in four days. At two o'clock that night I was awakened by a courier, who came with the startling news that Shabogesic was dying, and wished me to proceed at once to his bedside. I did so, and arriving at his home shortly after daylight I found him in a condition of most excruciating pain, all stitches were torn loose, the leg was out of position, extension cord cut and wound buried under a very generous poultice of Indian cow manure. This procedure was adopted at the suggestion of my brother practitioner Neweosh, the Indian Medicine Man, who took exception to my treatment and methods which were not in accordance with the ethics of his school of practice. On my return to this place I discovered that on the day of my first visit, before I was a mile away on my return home, Neweosh had caused the nurse to cut the extension cord and the stitches were cut by himself with his own trusty hunting knife.

Such were the conditions of the early practice in Northern Wisconsin, but happily, times have changed. To-day the Northern Wisconsin doctor has a very different class of people to deal with than he had a decade ago. To-day the people of Northern Wisconsin demand of the general practitioner the very best that there is in the practice of medicine. And we must be prepared to meet that demand. To-day the successful physician must be "up to date" in all that the term implies.

Experience and pathologic research play an important part in the evolution of a general practice. From a crude state it has gradually been developed, through constant study and careful investigation, to an almost exact science. It is indeed a pleasure, as well as an honor to be classed among those who are constantly laboring in the interest

of their chosen profession, and in the relief of suffering humanity. I do not agree with the majority of general practitioners in thinking that the man in general practice should assume the practice of the specialties. The ordinary man in general practice in Northern Wisconsin has all that he can do without entering the domain of the gynecologist, bacteriologist, neurologist, orthopedist, the abdominal surgeon, or any of the other accredited, or competent and thoroughly equipped specialists. On the other hand, I believe a man should not enter upon the practice of a chosen specialty until he is prepared to practice his specialty without encroaching on the grounds of the man in general practice.

In these days of social betterment, when all the civilized world is rapidly adopting Christian methods, the general practitioner of Northern Wisconsin cannot afford to recede from the prominent position he occupies in the State of Wisconsin and the entire Northwest, but must continue to be first in doing good, first in offering a preventative for the diseases which it is his duty to treat. For the public it is better, and for the physician more honorable, to prevent than to cure disease. It is said of the Chinese that they pay their doctors as long as they remain well; if attacked by illness the doctor dies first. We have been told to advise our tuberculous patients to shun Northern Wisconsin, as the climate there is too rigorous for them. This is entirely wrong. I would not wish to make Northern Wisconsin a popular Mecca, or dumping ground for the tuberculous world, but I believe that we have there a climate superior to Colorado, Arizona, or New Mexico, for the treatment of consumption, and I think we should by every honorable method in our power encourage the heroic efforts of our colleagues who are endeavoring to isolate the tuberculous family of Wisconsin in our own salubrious atmosphere. It has been asserted that tuberculosis in the earlier stages is a *curable* disease. It surely is largely preventable, and it is as we all know a highly contagious one.

Now then, if tuberculosis be communicable there is but one way to best deal with it, and the best way is the best for all concerned—patient, doctor, and public. In every instance where it is possible for a patient to communicate this disease, he should be placed where he could do the least harm to himself or others, and where there would be the greatest possible chance for his recovery. This would not work a hardship on the patient, but it would be a comfort to him. It is the most humane procedure to himself and to the public. I believe that a sanitarium established along the lines of the effort of Dr. Hopkins of Cumberland, would reduce the mortality of tuberculosis at least one-fourth.

In conclusion, I wish to mention a few methods and remedies that I have found serviceable in a general practice. Prior to the year 1898 the most difficult condition I found to control was that of spasmodic croup. Previous to this date I lost several little patients from this very trying condition in the treatment of which I had used nearly all the remedies known to the pharmacopoeia; since then I have not lost one case. To-day when called on to treat a case of spasmodic croup I at once give the child a large dose of any oleaginous substance—preferably castor oil; this I follow with 6 to 10 drop doses of common balsam copaiba, repeat every ten minutes until spasm is aborted. The procedure is not original with me, but was given to me by Dr. Riddel of Chippewa Falls. If this much abused remedy has no specific action on the urethra, it *surely acts as a paramount specific in spasmodic croup.*

In puerperal convulsions I have had to return to our old standard, *viz.*, chloral hydrate given per rectum in 15 grain doses while the patient is under chloroform anesthesia.

Convulsions of children I have always brought under control through the usual remedies supplemented by anesthesia.

The treatment of gonorrhea with the usual strong germicides is, as Prof. Gross used to say, equivalent to forcibly ejecting a skunk from a drawing room. It is better in either case *to use peaceful methods than physical strength.*

In the treatment of diphtheria I cannot say which remedy has saved the patient, as all cases were treated with heroic doses of antitoxin together with the regular routine Klebs-Loeffler treatment. I have had to discard the use of nearly all the popular disinfectants, and many of the antiseptics. Now, I believe that formaldehyde is one of the safest and most reliable safeguards we have. In obstetrical and surgical work it seems to be the *remedy pre-eminent.*

We are no longer students. We all have made certain discoveries that will *benefit* us if these discoveries are only made known at our meetings.

Now, there is another point I wish to touch upon, and that is our cheap John fee bill. This is a very important matter to the man in general practice in Northern Wisconsin. I had an experience, on entering the profession, of working for nothing so many years in charitable hospitals, that when I finally swung my shingle to the breezes of Northern Wisconsin, and a victim strayed into the office, I felt almost as if I were a thief to accept any pay from him. It took me a great many years to get up courage enough to demand a decent fee, and I presume several of us (if the truth were only known) have been in the same boat.

From the time we enter the profession we are told (if we have a good preceptor) that our calling is a humanitarian one, that we would have many years of starvation, and that we must have an ambition to enter the profession only for the good we can do. These are the teachings I received, and I have no doubt the majority of you received the same. But when a man has served his term of service, when he has worked his way through school by the sweat of his brow as I have done, when he has worked for nothing, and as our friend Ole Oleson would say "eaten himself" for many years, he should then demand good pay. The popular impression that obtains among the people is that we are willing to do almost anything to secure experience. In this respect there are more idiots in general practice than in any other calling I know of. I feel this when I look back years ago when I was driving through Sawyer and Washburn Counties day and night, running 2 to 4 horses to death, flattering myself that I was making an enormous amount of money, wearing myself out, breaking myself down—and I did break down as you all will do if you follow my example—and what was the result? I was spending all I made and collected from those who did pay me to take care of those who did not pay. I was so busy that I could not pay proper attention to my family. Frequently a doctor's family is the most neglected family in the community, and yet, we owe them as much attention as other families receive—otherwise a woman who marries a doctor is a very foolish woman.

I think, after we have reached a certain point, after we have studied as we should do and gotten in touch with medical literature, after we are equipped with ripe experience, then we should put on the brake and say to ourselves: I do not want to do so much work, but must do better work and for that work I must be paid. The present prices charged by the doctors of this association are entirely too low and inadequate for the service we render the public. As a remedy I would advise a complete revision of our fee bill, and exact a promise from each member that he would adhere rigidly to the charges laid down in this bill.

Gentlemen—I thank you for your forbearance of my harangue on "General Practice in Northern Wisconsin."

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EDITORIAL COMMENT.

SPECIAL CARS TO THE A. M. A. MEETING.

Dr. C. S. Sheldon, the Secretary of the State Society, requests all who are thinking of attending the meeting of the American Medical Association at Portland, July 11-14, to communicate with him at once at Madison. He is arranging for one or more special cars for the Wisconsin contingent to join the A. M. A. train from Chicago, June 30 to July 1. The excursion will include 5½ days in the Yellowstone Park, and will reach Portland July 10 and 11. This plan will enable the Wisconsin delegation to attend the meeting together and be much pleasanter than to go separately. The train may be

taken at Chicago, Milwaukee, Portage, La Crosse or St. Paul, and goes via the Chicago and St. Paul R. R. to St. Paul. The fare for the round trip from St. Paul via the Northern Pacific (returning by any other route if desired) is $45.00, to which is to be added one fare from the home starting point. Attention is called to the itinerary advertised in this issue of the JOURNAL.

COMMISSIONS TO STUDY EPIDEMICS.

We may look forward with some hope to the outcome of the work that has of late been undertaken by several municipal and national governments. A commendable paternalism, fostered by the everwilling unselfish assistance of the leaders of medical thought, has made possible the study of epidemics on a scale that is practicable, and one that must result in much good.

The work of tuberculosis commissions has gone down in history. The private, municipal, state, and national bodies that have given this subject consideration, and the splendid and uniform results that have been achieved, as well as the work still under way and promising well, are indications of what may be accomplished by united thought and action when instigated by a common motive.

The plague is at present engrossing the attention of England. The extent of its ravages in India is almost beyond belief. The total number of deaths from the plague in the Bombay presidency from Jan. 1st to Feb. 28th were 28,721, and in the rest of India from Jan. 1st to March 11th were 318,178, a total of 346,899. A scientific expedition will be sent to India to investigate this epidemic, looking to a possible remedy for this deplorable loss of life.

In our own country, aside from tuberculosis, other epidemics are being studied by special commissions. The prevalence of pneumonia in the East and West during the past winter has led to the appointment of committees for its investigation.

The latest commission is that created by the health officer of New York City, Dr. Darlington, to consider the ravages of cerebrospinal meningitis, which, it is estimated, will have claimed at least 1,200 victims in New York City before the season ends. The United States Bureau of Public Health has also ordered a statistical investigation, having issued letters of instruction to the secretaries of state boards of health and to municipal health officers.

The lamentable deaths of two prominent physicians, Dr. James A. Moore, of New Haven, and Dr. Albert B. Craig, of Philadelphia, both of whom contracted the disease during attendance upon malignant

cases, have probably hastened action in the appointment of this commission. As the members selected are among the very foremost in the land, we have hopes that good results may ensue.

THE PRE-MEDICAL COURSE AT THE STATE UNIVERSITY.

We desire to call attention to a letter, appearing on another page in this issue, by Prof. Bardeen, of the University of Wisconsin. The writer alludes to the advance made in the past few years in the establishment of courses in science that are preparatory to the study of medicine. That such a preparation in the ground work—the "basal sciences of medicine"—leads to a better comprehension of the later clinical work, facts will easily prove. The University of Wisconsin is following in the footsteps of other large and successful universities, and in the establishment of courses in science that are preparatory to the study of medicine, will largely replace the work of the first two years at many professional schools. We congratulate the State University upon the spirit of progress thus manifested, and would rejoice to see an expression of appreciation in a large attendance upon these branches of study.

THE DIVIDING LINE BETWEEN THE NEUROSES AND PSYCHOSES.

Interest is evidently growing in mental diseases and it is especially noticeable that many well-known men who formerly were distinguished as neurologists are showing an increasing *penchant* for alienistic studies. As illustrating this tendency, we may mention Dana of New York, and Dercum of Philadelphia, whose activity until recently has been largely that of the neurologist.

Every alienist will welcome the advent of the trained neurologist to the ranks of the psychopathologists. The point of view of the former compared and connoted with that of the latter may well supply new and fruitful suggestions. The experience of the neurological specialist is to quite an extent with cases of insanity in its incipient stages, some of which do and others of which do not fully develop so that commitment to a hospital for insane later becomes necessary. An important result of recent study and discussion has been the discovery that the neurologist in his field and the insane hospital physician in his, are each looking largely at the same cases in different stages of their development. This fact has come somewhat as a surprise to the neurologist, who long failed to see the essential mental disease in his cases of hysteria, neurasthenia, hypochondria, which

were attributed to exhaustion and functional nerve weakness in one or another of the bodily organs (uterus, eye, stomach, etc., etc.).

Dana has recently expressed the opinion that these cases are cases of mental disease, applying to them the term "phrenasthenia" instead of "neurasthenia"—in other words they are "psychoses," or in plainer words still—cases of "insanity," harsh as that word may seem when applied to patients clear and apparently rational in mind except upon some single hysterical or hypochondriacal obsession, phobia or delusion that has taken possession of their minds. Yet weakness of brain and hence of mind is their essential characteristic, and they differ only in degree from the inmates of the hospital for insane. While the word "insanity" in common parlance, and even in medical usage, is only seriously used to designate a profound condition of derangement in which the brain is largely or totally "out of commission," still, in a strictly scientific medical and logical sense, insanity means all and every disorder and disease of mind. "Insanity," however, while perfectly definite in its medical sense, has innumerable other uses and meanings in legal, colloquial and jocular use, and it is a very unsatisfactory term. "Psychosis" ought to be substituted for it as more correctly describing all mental disease, severe or mild, and being less apt to wound tender susceptibilities. "Major" and "minor" might then well be applied to the different degrees, although it should be understood that the difference is in degree and not in kind, and the word "insanity" in medical usage might be abandoned altogether.

SANITATION OF RAILWAY CARS IN KENTUCKY.

Kentucky has become the pioneer in the matter of railway car sanitation. As will be seen below, the regulations for disinfection are scrupulously exact, and if there is anything at all to be gained by methods now in use, the railway coaches ought to be as free from possible infection as any dwelling. It recently came to light that the blankets in daily use in the sleeping coaches of one large railway company are aired but once in six months. No one will gainsay that the railroads owe it as a duty to their patrons to provide them with coaches that are reasonably clean, and this can only be accomplished by some such method as has been adopted in Kentucky. As it is altogether probable that other State Boards of Health, appreciating the desirability of this action, will essay to follow in this laudable work, we append the regulations adopted by the Kentucky State Board for the guidance of the railway companies in that state:

"All day coaches engaged in regular traffic shall be thoroughly cleansed after each trip at such points as facilities for the same have been provided. In no case shall such cleansing be less frequently performed than on every third day of use. In such cleansings, all rugs, mattings and upholstered seats and back rests, when practicable, shall be removed from the coach to the open air for mechanical cleansing, and be exposed to sunlight when the prevailing meteorological conditions shall permit.

"All interior surfaces in coaches are to be mopped, scrubbed or cleansed at intervals of not more than ten days, with solutions of mercury bichlorid, carbolic acid, tricresol or other disinfecting preparations preferred by any corporation, and approved by this board as to ingredients and strength.

"Spittoons are to be provided in numbers of not less than one for each seat in all smoking cars and toilet rooms, and one at each end of all other day coaches, and in all waiting rooms. Placards provided by this board shall be displayed at each end of all such coaches and in waiting rooms, indicating the importance of using the spittoons, and it shall be unlawful for any person to spit on the floor or platform on any railway car, or other public conveyance or on the floor of any waiting room or platform in any station or depot.

"All coaches of any kind in which an acute infectious disease has been carried shall remain closed and unoccupied after such person has been removed until it has been thoroughly cleansed and disinfected by the use of formaldehyde gas in quantities of not less than forty fluid ounces of formalin to each coach. All day coaches in regular use for through travel are to be disinfected after cleansing by some method approved by this board at intervals of not more than ten days.

"All toilet rooms, water closets, urinals, spittoons and toilet appliances are to be scrubbed with soap and hot water and disinfected with formalin, or other approved method, after each trip's use, and shall be kept as clean as possible when on the road, and all similar rooms in stations shall be cleansed daily in the same way, and when vaults or surface receptacles are used in stations these shall be disinfected daily with fresh lime.

"All preceding regulations in regard to cleanliness and disinfection shall apply equally to sleeping, dining, buffet and parlor cars used in the service of the public.

"All blankets, curtains and hangings used in sleeping cars shall be exposed to superheated steam, or other means of disinfection approved by this board at intervals of not more than ten days, and all mattresses shall be so treated at intervals of not more than sixty days."

A LESSON IN SANITATION.

A most interesting and valuable sanitary report has recently been made to the village of Lawrence, N. Y., by a Mr. George A. Soper, sanitary engineer (*Medical News,* Feb. 11, 1905). The occasion of the investigation made was given by reason of a sporadic outbreak of typhoid fever in Lawrence during the summer, fall and early winter of 1904. It was known that the water supply of this village has been

remarkably pure, nor did inspection of the sources of milk supply indicate the latter as the channel of infection. The total number of cases whose presence disturbed this village in which typhoid is a rarity, was 31, and of these over two-thirds were traced directly or indirectly to oysters (one to clams) taken from water that had been polluted with sewage.

This investigation was made in a most creditably painstaking manner. All the patients known to have had typhoid fever were interviewed and their history obtained. The various oyster beds were visited. The sewage entry and currents were carefully noted, and bacteriologic examinations of sewage and oysters made.

Mr. Soper concludes that the conditions found "fully warrant the opinion that not only have the oysters and clams taken from these waters been unsafe to eat, but their shells have been dangerous to handle. In my judgment, the pollution of Jamaica Bay by the sewage of Arverne, and of Inwood Cove by the sewage of Far Rockaway, and other unwholesome drainage, has caused directly or indirectly, 21 of the 31 cases with which this investigation has been concerned."

There has thus far been no unanimity of opinion as to the possibility of the oyster being a carrier of infection. This investigation will without question be proof conclusive to one community, and it is safe to say that no epidemic traceable to the same cause will again occur in Lawrence, N. Y. It may also be safe to predict that other communities will profit by this most excellent report of Mr. Soper.

ITEMS OF INTEREST.

Christian Science in Ohio. The Supreme Court of Ohio, in a recent decision, holds that Christian Science healers cannot practice in the state without a license. The court stated:

"The giving of Christian Science treatment for a fee, for the cure of disease, is practicing medicine within the meaning of the statutes regulating such practice in this state. The statute making it a misdemeanor to give such treatment for a fee is not interference with the rights of conscience and of worship, and is not on that ground unconstitutional. Legislation prohibiting anyone from treating a disease for a fee, excepting such persons as have prescribed qualifications, is valid exercise of the police power of the state and is constitutional."

Philippine Islands Medical Association. We are in receipt of a program of the Second Annual Meeting of the Philippine Islands Medical Asso-

ciation that convened in Manila during the first week in March. The program is one of unusual interest, and contains articles that cover the entire domain of medicine and surgery, including climatology, hygiene, forensic medicine, and the study of tropical diseases. Among those from neighboring countries invited to deliver addresses were Profs. Baelz, Shiga, and Seriba, of Tokyo. Dr. John R. McDill, formerly of Milwaukee, is the president of the Association.

A Fiftieth Anniversary. The pharmaceutical house of Frederick Stearns & Co., of Detroit, Mich., has just completed its fiftieth year in business. In commemoration of this event the firm has issued an anniversary number of its publication, "The New Idea." In this are historical sketches of the founder and other members of this firm, an illustrated history of the wonderful growth of this house from its inception; as an added feature, it is replete with excellent anecdotes. This anniversary issue of "The New Idea" is an exceedingly creditable publication.

For Compulsory Vaccination in Philadelphia. Dr. Edward Martin, Director of Public Health, Philadelphia, has caused to be introduced in the legislature of Pennsylvania a bill providing for compulsory vaccination. The bill provides "that the health authorities may from time to time, when they shall deem it necessary to prevent the spread of smallpox, issue an order requiring all citizens to be vaccinated within such time as they may prescribe; provided, that persons who can prove that they have been successfully vaccinated within five years may be exempt from its terms."

State Board of Examiners of Registered Nurses. A bill is now before the Illinois State Legislature providing for the establishment of a State Board of Examiners of Registered Nurses for the examination, registration and licensing of nurses for the sick in the State of Illinois. The purposes of the bill are to elevate the profession of nursing and to protect the public against quackery. This bill has received the support of the Chicago Medical Society and the Illinois State Association of Graduate Nurses.

Two Successors to Dr. Osler Named.—Dr. Lewellys F. Barker, Professor of Medicine in the University of Chicago, has been elected Professor of Medicine in Johns Hopkins University and physician-in-chief to Johns Hopkins Hospital, and Dr. William S. Thayer, Associate Professor of Medicine in Johns Hopkins University, has been elected Professor of Clinical Medicine, to succeed Dr. William Osler, who will go to Oxford University to become regius professor of medicine.

The New York Pharmacal Association has issued a panel which graphically illustrates, in colors, "The Theory of Evolution" and "The Descent of Man," as promulgated by Haeckel. This panel will prove of considerable interest, as it is exceedingly well executed, and pertains to a subject of more or less interest to physicians. As it has been published for gratuitous distribution, a copy will be mailed to any physician submitting a request for same.

Nebraska Medical Bill Vetoed. Gov. Mickey, of Nebraska, has vetoed the bill passed by the legislature providing that all practitioners who accept pay as healers be compelled to take a four years' course and pass an examination before the medical board before they may practice in the State of Nebraska. The bill was aimed particularly at Christian Science healers.

The cost of providing medical charities by maintaining elaborate hospitals is given much concern. As the result of a conference held, the sixty-two public and private hospitals of the City of New York will be represented by a central committee to devise the best methods of dealing with conditions and raising a common endowment fund.

Prof. Manuel Garcia, inventor of the laryngoscope, was tendered a reception and banquet in London, the occasion being his one hundredth birthday. Representatives, lay and medical, of several nations were present to do him honor. Orders were conferred upon him by King Edward, Emperor William and King Alphonso.

The Quarterly Commencement of Rush Medical College for the winter quarter was held March 24th at the college. Prof. J. Clarence Webster delivered a memorial address on the late Dr. DeLaskie Miller, and Prof. Judson, of the University of Chicago, addressed the students on "Medical Research as It Appears to a Layman."

Mosquito Theory Developed in the Sixth Century. Sir Henry A. Blake, Governor of Ceylon, announced at a recent meeting of the Asiatic Society, that Singalese medical books of the sixth century described 67 varieties of mosquitos and 424 kinds of malarial fever caused by mosquitos.

Brother Seraphon Van Koop, who has followed Father Damien in work among the lepers at Molokai, Hawaiian Islands, is reported to have fallen a victim to the disease. This martyr is but 28 years old and is a member of a wealthy Belgian family. He has been at Molokai two years.

Isolation in Louisville. There is as yet no Isolation Hospital in Louisville, Ky., for the care of contagious diseases. Recently a young lady afflicted with diphtheria had to be placed on an anchored boat in the Ohio River as the only means offered for obtaining perfect isolation.

The whipping post and pillory have been abandoned in New Jersey as too barbaric punitive methods even for the crime of wife beating. Why not continue this mode of punishment for the advertising quacks who prey upon credulous people suffering from malades imaginaires?

Oshkosh Has an Anti-Spitting Ordinance. The Oshkosh Common Council, without a dissenting vote, has adopted an anti-spitting ordinance, the direct result of a propaganda inaugurated by the clubwomen of the city.

Dr. James H. Stanton died from typhoid fever at his home in Prairie du Chien, March 22d. He was graduated from the St. Louis College of Physicians and Surgeons in 1898.

Rush Alumni Meeting. An informal meeting of the Rush Alumni at luncheon during the annual session of the State Medical Society at La Crosse, is announced for June 8th.

IN MEMORIAM.

JAMES BELLAMY WHITING, M. D.

BY SAMUEL W. FRENCH, M. D.

On Tuesday, March 28th, 1905, Dr. James Bellamy Whiting, of Janesville, entered into eternal rest after an illness of several weeks. Dr. Whiting was born at Barkhamsted, Litchfield Co., Conn., Dec. 16th, 1822. He was educated in the public schools, and after graduating taught school for five years. He attended lectures at both the Vermont and Berkshire Medical Colleges, and was graduated with the degree of M. D. from the Berkshire Medical College in 1848. He first practiced in Wolcottville, afterwards in Brooklyn, and in Lee, Mass. In 1850 he removed to Janesville and has ever since been a respected and able practitioner of this state.

Dr. Whiting earned great honor during the civil war as surgeon of the 33rd Wisconsin. In 1864 he left the army and returned to Janesville. For the years 1893 and 1894 he was elected Medical Director of the Wisconsin G. A. R. and in 1895 Surgeon-General of the National G. A. R. During President Cleveland's administration he was appointed a member of the Commission to treat with the Chippewa Indians for the sale of their reservation and was of great aid to them in the performance of his duty. He ever took a great interest in the State Medical Society and was a constant attendant at its meetings, and, being by nature an orator, was often heard at its banquets. In the years 1867-'69 he served as Vice-President, and in 1876 was elected President. One year and a half ago he was presented with a handsome silver loving cup by the Southern Wisconsin Medical Association as a token of esteem and love. He was what Dr. O. W. Holmes was wont to call "of the Brahmin Caste" and a student of literature as well as of medicine. For many years he was vestryman of Christ Church of Janesville. He was married in 1850 to Miss Francis Hungerford. After her death in 1852 he married the widow of Chief Justice Whiton of this state. Dr. Whiting leaves two daughters, Mrs. Francis Hungerford Spalding, residing at Janesville, and Mrs. Mary Louise Kelly, who resides in the East.

No one knew Dr. Whiting but to love him. He was particularly

solicitous for the young man, and being ever on the alert to learn of all advancements in medical and surgical science, he knew that he could best glean them from the papers of the young man. His honesty of purpose, his hearty greeting, his eagerness for knowledge, his mind of Spring in the body of Winter, his detestation of shams were all lovable qualities of his character that his professional brethren may well take as examples to follow through life. There are but few of these old giants left, but we should be thankful that our brother lived long enough to inspire his individuality upon us and our noble profession. Another good man gone; another of the medical pioneers of the state gone to give an account of his earthly life. We feel well assured that the reply will be: "Well done thou good and faithful servant."

CORRESPONDENCE.

THE DEPARTMENT OF ANATOMY AT THE UNIVERSITY OF WISCONSIN.

Editor Wisconsin Medical Journal.

Dear Sir: I should like to call the attention of the readers of the Wisconsin Medical Journal to the department of anatomy recently organized at the University of Wisconsin. The department represents a natural step in the development of the facilities there for the study of biology. Up to twenty-five years ago natural history was taught chiefly by deductive methods. Then a department of zoology was organized under Professor Birge, and one of botany under Professor Henry, at present in charge of R. A. Harper. These departments have had a healthy, progressive growth and from them has sprung the department of bacteriology and hygiene, which for a decade has been in Professor Russel's hands, and the department of anatomy organized last year. It is hoped soon to add departments of physiology and of experimental pathology so that biological problems may be there advanced in their broadest aspects, both in their scientific bearings and in their relations to the practical problems of life.

Soon after the organization of the department of zoology this was made a nucleus for a course designed to prepare students for the study of medicine. This preliminary course has proved of the greatest value. Students who have taken it have in almost all cases made a marked success in medicine.

Since the organization of this preparatory course a great change has taken place in medical education in this country. Standards of entrance into the medical schools have been raised, extensive laboratory courses have been introduced, clinical advantages have been increased and the curriculum has been lengthened to four years. With the establishment of a graded curriculum there has been a natural division of the course of study, the first two years being given up chiefly to the basal sciences on which scientific medicine rests, the last two years chiefly to clinical study.

This division of study has made it possible for several universities which possess no adequate facilities for clinical teaching, but which have good departments of physics, chemistry and biology, so to extend their facilities as to offer most excellent courses preparatory to and covering the field of the first two years of the medical curriculum. The student having received a thorough foundation in the basal sciences, and having acquired breadth of view from his university associations, is then at liberty to choose some school in which to complete the last two clinical years of the medical course. This example Wisconsin is about to follow.

The purpose of the establishment of these new departments is not, however, merely to train students for the study of practical medicine, although it is intended that the training they offer in this direction shall be unsurpassed. In addition the departments are to serve as active centers for the extension of scientific knowledge in the fields to which they are devoted. They are designed not to rival institutions at present existing in this State, but, on the contrary, to undertake work of a character which can be carried on only at a great University where numerous scientific departments are working in harmonious conjunction.

We are desirous of seeing relations of mutual benefit established between the university and the medical profession of the State. The library, the museums and the laboratories there will be so extended, we hope, that the physician can turn to them with confidence for the latest and most accurate information concerning the progress of the basal sciences of medicine. Furthermore, we should like any physician who has conceived of a possible solution of some big problem in medicine, to feel that at the State University adequate facilities may be found for working it out in those experimental aspects which precede practical application. Koch was a country practitioner when he went to a German University with a big idea.

While thus we trust the University departments of the basal sciences may prove of value to the physicians of the State, we desire

on the other hand the aid of the medical profession in developing our facilities for study. Gifts to the library and to the anatomical museum will be especially welcome. We desire to build up a first class museum of normal and pathological human anatomy. For the pathological specimens we must depend upon physicians. We are likewise especially desirous of developing a first class cabinet of human embryology. Any physician willing to send us specimens of human embryos that may come into his hands may be assured that the best possible care will be taken to make them of permanent value for scientific study. Due acknowledgment of the donation will in all cases be made in labeling specimens that may come to us and in referring to the specimens in scientific articles based upon them. The embryos, when possible with membranes intact, should be placed as soon as possible in a 5 per cent. solution of formalin, or in 95 per cent. ethyl alcohol. Specimens may be sent to me at Science Hall, the University of Wisconsin, Madison.

Yours very truly,

CHARLES R. BARDEEN,
Professor of Anatomy.

Typhoid Perforation.—MORRIS MANGES, New York City (*Journal A. M. A.*, April 1, 1905), reports nineteen cases of perforation in typhoid, with sixteen operations and five recoveries. He emphasizes particularly the diagnostic significance of pain, which under certain conditions in this disease may accompany non-perforative peritonitis. He considers that the most important facts in the diagnosis are the marked change in the patient's condition with the abdominal pain, which is very variable, and that the other abdominal conditions, distension, rigidity, tenderness, liver dullness, etc., with the anxious facies and sweating, are valuable aids in the diagnosis. Changes in the rate and character of the pulse are of more value than temperature or respiration. Manges believes in the occasional spontaneous cure of this condition and refers to one case in his series in which this apparently occurred, and to another in which, at the autopsy, a small perforation was found well sealed by omentum. The rule to operate, however, is not vitiated by these rare occurrences, and operation itself does not add to the dangers and may be effective in preventing a perforation where one is not found.

THE STATE MEDICAL SOCIETY OF WISCONSIN.

ORGANIZED 1841.

Officers for 1904-1905.

C. W. OVIATT, Oshkosh, President.

J. A. L. BRADFIELD, La Crosse, 1st Vice-President.

GILBERT E. SEAMAN, Milwaukee, 2nd Vice-President.

A. B. ROSENBERRY, Arbor Vitae, 3rd Vice-President.

CHAS. S. SHELDON, Madison, Secretary.

S. S. HALL, Ripon, Treasurer.

A. T. HOLBROOK, Milwaukee, Assistant Secretary.

Councilors.

FOR ONE YEAR.

1st Dist. H. B. Sears, - - Beaver Dam
2nd Dist., J. G. Meachem, - - Racine

FOR TWO YEARS.

3rd Dist., F. T. Nye, - - - Beloit
4th Dist., E. S. Hooper, - - Darlington

FOR THREE YEARS.

5th Dist., J. F. Pritchard, - - Manitowoc
6th Dist., J. S. Walbridge, - - Berlin

FOR FOUR YEARS.

7th Dist., W. T. Sarles, - - - Sparta
8th Dist., T. J. Redelings. - - Marinette

FOR FIVE YEARS.

9th Dist., D. L. Sauerhering, - Wausau
10th Dist., E. L. Boothby, - - Hammond

FOR SIX YEARS.

11th Dist., J. M. Dodd, - - Ashland
12th Dist., A. T. Holbrook, - - Milwaukee

Next Annual Session, La Crosse, June 8, 9 and 10, 1905.

The Wisconsin Medical Journal, Official Organ.

COUNTY SOCIETY DUES ARE NOW PAYABLE.

DO NOT FORFEIT YOUR STATE SOCIETY MEMBERSHIP.

SOCIETY PROCEEDINGS.

THE COUNTY RETURNS — STATE SOCIETY MEETING.

The returns from the County Societies for the second year have begun to come in, and they afford something of an index as to what the final result will be. To be sure they are something in the nature of a preliminary report, since, doubtless, many of the delinquents will be gathered in before the time of the annual meeting. To date there is something of a net loss, but the prospects, on the whole, are encouraging. Those reporting a net loss, as compared with the whole number on the roll last year, are as follows: Clark, 2; Langlade, 2; Lincoln, 1; Marinette, 1; Monroe, 4; Oneida, 4; Shawano, 2; Taylor, 1; Vilas, 2; Walworth, 3, and Waupaca, 9—making 31 in all. Those reporting a net gain are, Dunn, 1; Kenosha, 3; Kewaunee, 2; Rock, 4, and Washburn-Sawyer-Burnett, 2—a gain of 12. Iron just holds her own. This makes a net loss of 19 in 17 counties—with proper effort

this loss will be more than made good during the next two months. One of the most encouraging features of the situation is that the sparsely settled counties in the northern part of the state are likely to hold their own as compared with their more favored brethren. It is already clearly demonstrated that, to keep up these county organizations, it is necessary to have something more than simply a society on paper—a list of names who pay the annual dues. There must be life and activity, with regular meetings, which shall be interesting and instructive. This requires much tactful management by those in charge, and no society will run itself without such effort. In one southern county—with 20 or 30 doctors—the secretary writes that they have had no meetings for nearly a year, and the consequence is that there is not, as yet, a single payment of dues. So a complete reorganization is necessary. In some cases a readjustment is called for. The secretary of the Forest-Florence County Society writes that they have been unable to maintain meetings because the few doctors in those counties are so widely separated, and on different lines of travel, that it is impossible to get them together in any central place of meeting. He suggests that Forest be united with Oneida, and Florence with Marinette, as being a more natural arrangement with accessible places of meeting. To encourage the plan of regular meetings each county secretary will be requested to forward to the state secretary a full schedule for the coming year, with dates of meetings, and places if possible, which shall have a permanent place in the JOURNAL during the year along with the officers of the Society. This will commit the Societies—so to speak—to a fixed procedure and will enable all the members to keep these meetings in mind. We need not feel discouraged if the whole machinery of the plan does not work smoothly from the start. We have made a good beginning, but the full growth and development are yet to come. The educating process is going on rapidly in every part of the state and there is such inherent excellence in the plan that it must succeed in the end. There are 45 counties yet unreported this year. Let us hope and expect that the next issue of the JOURNAL will show a substantial gain—increasing as the reports come in. To accomplish this, however, means much earnest work both by the Counselors and the county officers.

The State Meeting at La Crosse, June 8, 9 and 10, bids fair to be the most notable gathering in the history of the Society—both in numbers and interest. Dr. Hugh H. Young, Professor of Genito-Urinary Surgery at Johns Hopkins University, will deliver the Address in Surgery, and Professor V. C. Vaughn of the University of Michigan, that in Medicine. Both these addresses will be of the

greatest interest and add much to the value of the meeting. The literary program, in charge of Dr. Washburn, has been prepared with great care, and will embody the best thought and ability of the profession. Moreover, we are sure of having the finest kind of a time *socially*. From personal experience we can abundantly testify as to the sort of hospitality dealt out by the La Crosse profession. It is spontaneous and genuine and meets all the requirements for fraternal good-fellowship. It has been agreed on all hands to take our wives with us to the meeting. If *we* need the outing, the faithful attendants of the telephones at our homes need it fully as much. The ladies of La Crosse are fully equal to their husbands in hospitality, and the ride on the Mississippi will be all that is claimed for it.

This meeting is really a *union meeting* of the County Societies, and thus *their* meeting in every sense of the word. Let the county societies come to the rescue and vie with one another in the size of their delegation. Let officers and members work for it from this time on.

It is well to repeat Dr. Washburn's request that all writers of papers secure at least two members to open the discussion on their papers, and that such members have the paper, or a full synopsis, as early as May 1st.

Bear in mind also the Pathological Exhibit which should be a marked feature of the meeting. Send specimens at any time before the meeting to Dr. Edward Evans at La Crosse.

As announced in the last JOURNAL, it has been found necessary to change the date of the meeting *one day* later—so that it will be June 8, 9 ,and 10th, instead of 7, 8, and 9th. *Give this change the widest possible* notice, so that no one will fail to know of the change.

(C. S. S.)

DODGE COUNTY MEDICAL SOCIETY.

An adjourned meeting of the Dodge County Medical Society was held in Beaver Dam, March 20, 1905.

Poor roads resulted in a very limited attendance and the absence of papers promised. Dr. W. H. Washburn of Milwaukee, by invitation, gave a very interesting and instructive paper on "*Emphysema of the Lungs.*" Dr. J. F. Brown, of Waupun, was added to the list of members.

H. B. SEARS, M. D., *Secretary.*

DUNN COUNTY MEDICAL SOCIETY.

The Dunn County Medical Society met in regular session at Menomonie, March 21, 1905. Dr. L.L. Herriman, of Boyceville, was elected to membership

Dr. Ribenack gave a very interesting talk on "*Medical Practice in Mexico.*" Dr. Barker reported a case of injury with mysterious hemorrhage, which was generally discussed. Dr. Grannis's motion to make our meetings monthly instead of quarterly was carried unanimously. A committtee on public health and legislation, consisting of Drs. Grannis, Howison and Barker, was appointed by the chair.

The matter of traveling physicians, quacks, and fakirs, was generally discussed, and upon motion was referred to the Committee on Public Health and Legislation, to be investigated and reported on at our next meeting. The letters from Dr. Harper of the State Board of Health, regarding Assembly bills Nos. 160A, 460A and 282S, were read, discussed and referred to the above committee.

The meeting then adjourned until April 18, 1905.

B. J. STEVES, M. D., *Secretary.*

LA CROSSE COUNTY MEDICAL SOCIETY.

The La Crosse County Medical Society held its regular monthly meeting April 6.

Dr. J. A. L. Bradfield read a paper on "*Chronic Inflammation of the Tonsils; Its Treatment and the Removal of the Tonsils.*" The meeting was well attended and a general discussion of the paper followed its reading.

Dr. E. Evans reported favorable progress as to the various arrangements for the coming meeting of the State Medical Society, to be held in this city in June.

C. H. MARQUARDT, M. D., *Secretary.*

ROCK COUNTY MEDICAL SOCIETY.

The Rock County Medical Society held its regular meeting at Janesville, on Friday, March 31, 1905. The following interesting program was presented:

Asthma and Its Effects—Dr. E. C. Helm, Beloit; *Diagnosis and Treatment of Hemorrhoids*—Dr. W. W. Crockett, Beloit; *Differential Diagnosis of Appendicitis in Children*—Dr. Fred Sutherland, Janesville; *Report of a Case of Intestinal Obstruction*—Dr. L. F. Bennett, Beloit; *Curettement of the Uterus and Its Improvements*—Dr. P. A. Fox, Beloit; *Otitis Media Acuta*—Dr. F. T. Nye, Beloit.

G. W. FIFIELD, M. D., *Secretary.*

WASHBURN-SAWYER-BURNETT COUNTIES MEDICAL SOCIETY.

The last meeting of the Washburn-Sawyer-Burnett County Medical Society was held at Spooner, March 16th, in conjunction with the Barron-Gates-Polk County Medical Society.

About thirty physicians were present and the following program was presented:

DIRECTORY OF COUNTY SOCIETIES.

COUNTY.	PRESIDENT.	SECRETARY.
Ashland	W. T. Rinehart, Ashland.	N. N. Glim, Ashland.
Barron-Gates-Polk	Gentz Perry, Amery	I. G. Babcock, Cumberl'd.
Bayfield	H. G. Lampson, Washb'n	T. B. Hicks, Washburn
Brown	D. H. Gregory, De Pere.	A. V. de Neven, Gr'n B'y
Buffalo-Pepin	M. B. Axtell, Pepin	P. B. Amunson, Mondovi.
Calumet	J. E. Luce, Chilton	G.P.McKenney, Stkbridge
Chippewa	C. A. Hayes, Chipp.Falls.	J.N.Cunningham, Stanley.
Clark	D. R. Freeman, Colby	V. M. French, Neillsville.
Columbia	B. C. Meacher, Portage	A. W. Jones, Randolph.
Crawford	W.T.Pinkerton,Pr'ie du C	J. G. Hoffman, P. du C'n.
Dane	C. A. Harper, Madison	R. H. Jackson, Madison.
Dodge	E. M. McDonald, B. Dam	H. B. Sears, Beaver Dam.
Door	H.R.Simon, Sturgeon Bay	G.R.Egeland, Sturg'n By.
Douglas	George Saunders	W. W. Pretts, Superior.
Dunn	L. A. Larson, Colfax	B. J. Steves, Menomonie.
Eau Claire	J.V.R.Lyman,Eau Claire.	H. A. Fulton, Eau Claire.
Fond du Lac	J.H.McNeil, Fond du Lac.	Flora A.Reed,FondduLac.
Forest-Florence	C. A. Decher, Crandon	S. M. B. Smith, Crandon.
Grant	L.G. Armstrong, Boscobel	M.B. Glasier, Blooming'n.
Green	T. W. Nuzum, Brodhead.	W. B. Monroe, Monroe.
Green Lake	C. E. Thayer, Markesan.	B. E. Scott, Berlin.
Iowa	W. J. Pearce, Dodgeville.	S. P. Deahofe,Mineral Pt.
Iron	J.H.Urquhart, Iron Belt.	T. J. Hambley, Hurley.
Jefferson	Wm. W. Reed, Jefferson.	Carl Feld, Watertown.
Juneau	J. B. Edwards, Mauston.	A. T. Gregory, Elroy.
Kenosha	G. Windesheim, Kenosha	F. E. Andre, Kenosha.
Kewaunee	R. H. Rice, Kewaunee	W. Wochos, Kewaunee.
La Crosse	F. C. Suitor, La Crosse	C.H.Marquardt,La Crosse
Lafayette	C. C. Gratiot, Shullsburg.	C.Lehnkering, Darlington
Langlade	I. D. Steffen, Antigo	F. V. Watson, Antigo.
Lincoln	Jos. Farber, Merrill	L. B. Collier, Merrill.
Manitowoc	Louis Falge, Reedsville	J. E. Meany, Manitowoc.
Marathon	D. La Count, Wausau	H. L. Rosenberry,Wausau
Marinette	T.J.Redelings, Marinette.	A. T. Nadeau, Marinette.
Marquette	W.J.Thompson, Briggsv'l	W. O. Dyer, Westfield.
Milwaukee	J. W. Coon, Milwaukee	A. W. Gray, Milwaukee.
Monroe	G. R. Vincent, Tomah	C. M. Beebe, Sparta.
Oconto	C. W. Stoelting, Oconto.	H.F.Ohswaldt,OcontoFalls
Oneida	C.D.Packard, Rhinel'der.	S. R. Stone, Rhinelander.
Outagamie	J. T. Reeve, Appleton	M.J. Sandborn, Appleton.
Ozaukee	E. E. Couch, Pt. Wash	Thos.A.Berwick,Saukville
Pierce	Henry C. Cotton, Prese'tt	D. C. Munger, Ellsworth.
Portage	Galen Rood, Stevens Pt	C.v.Neupert,Jr.,Stev's Pt.
Price	W. P. Sperry, Phillips	A. D. Gibson, Park Falls.
Racine	W. S. Haven, Racine	C. F. Browne, Racine.
Richland	R.H.DeLap, Richland Cr.	M. W. Haskell, Richl'd C.
Rock	S. B. Buckmaster, Jans'le	G. W. Fifield, Janesville.
Sauk	Chas. Gorst, Baraboo	Roger Cahoon, Baraboo.
Shawano	W.H.Cantwell, Shawano.	H. W. Partlow, Shawano.
Sheboygan	O. J. Gutsch, Sheboygan.	H. C. Reich, Sheboygan.
St. Croix	E.L.Boothby, Hammond	L. P. Mayer, Hudson.
Taylor	E. LeSage, Medford	J. H. Francis, Medford.
Trempealeau-Jackson	G. N. Hidershide, Arc'dia	Henry A. Jegi, Galesville.
Vernon	J. K. Schreiner, Westby.	C.H.Trowbridge, Viroqua
Vilas	A. B. Rosenberry, Ar. Vit	W. J. Pinkerton, Eagle R.
Walworth	Edward Kinne, Elkhorn.	M. V. Dewire, Sharon.
Washb'n-Sawy'r-Burn'tt.	J. P. Cox, Spooner	E. R. Hering, Shell Lake.
Washington	D. W. Lynch, West Bend	W. J. Wehle, West Bend.
Waukesha	H. G. B. Nixon, Hartland	Mayb'le M. Park, W'ksha
Waupaca	L. H. Pelton, Waupaca	J. F. Corbett,Weyauwega.
Winnebago	G. M. Steele, Oshkosh	S. B. Ackley, Oshkosh.
Wood	O. T. Hougen, G'd Rapids	F. Pomainville, G'd. R'ds.

"Some Unusual Gynecological Cases," Dr. H. P. Ritchie, St. Paul, Minn.
"Relation of Physicians to Each Other," Dr. J. M. Dodd, Ashland.
"Medical Organization," Dr. Boothby, Hammond.
"Ethyl Chloride as a General Anesthetic," Dr. Coleman, Barron.
"Some Common Eye Diseases," Dr. A. P. Blackley, Hayward.
"Tuberculosis Pulmonalis," Dr. F. W. Stewart, Spooner.
"Aseptic Obstetrics," Dr. J. P. Cox, Spooner.
The papers were very interesting and were much discussed.
After the scientific program a banquet was given by the local society.

E. R. HERING, M. D., *Secretary.*

FOX RIVER VALLEY MEDICAL SOCIETY.

The annual meeting of the Fox River Valley Medical Society was held at Green Bay on Tuesday, January 17, 1905. A clinic was held at St. Vincent's Hospital by the president, Dr. J. R. Minahan, previous to the morning session. An extensive carcinoma of the breast was operated on, the tumor being removed and the arm amputated at the shoulder-joint.

At the morning session the annual reports of the Secretary and Treasurer were read, and routine business transacted, the present membership being reported as 121.

At the afternoon session a paper was read by Dr. R. E. Minahan on *Puerperal Fever,* and a paper was read by Dr. A. I. Bouffleur, of Chicago, as invited guest of the society, on *Prostatectomy.*

The following officers were elected for the ensuing year: President, Dr. A. C. Mailer, of DePere; First Vice-President, Dr. E. Sawbridge, of Stevenson, Mich.; Second Vice-President, Dr. W. A. Gordon, of Winnebago; Secretary and Treasurer, Dr. J. S. Reeve, of Appleton.

At the close of the session the members sat down to the annual banquet, followed by numerous toasts. J. S. REEVE, M. D., *Secretary.*

MILWAUKEE MEDICAL SOCIETY.

At the meeting of March 14, 1905, Dr. Stoddard presented an interesting case of *osteomyelitis* in which a large cavity had become almost filled by granulation. The skin over the bone had been spiked to the bottom of the cavity.

Dr. P. H. Jobse read a paper entitled: "*Undescended Testicle, with Exhibition of a Case Showing Results of Operation.*" (This paper will appear in THE JOURNAL.)

Dr. Fiedler addressed the society on "*The Determination of Blood Stains.*" Determination and differentiation of blood stains may be considered under three heads:

1. Determination of presence of blood: (a) Chemical tests: Guaiac test, Sodium tungstate test, Hemin crystals. (b) Microscopic test: Spectra of hemoglobin and its derivatives. (c) Microscopic test: Finding of corpuscles.

2. Differentiation of mammalian blood from that of fish, reptiles, and birds. Microscopic tests: Shape of corpuscles, and whether nucleated or not.

3. Differentiation of human blood. Serum test: Formation of specific precipitin.

The precipitation of human albumen, if produced in the serum of the rabbit's blood by injecting intraperitoneally into the animal, at intervals of three or four days, about 10 cc. of defibrinated human blood. After six or seven injections the animal is bled and the blood allowed to clot. The clear serum is used as the reagent. The specific reaction is the precipitation of human serum, albumen, and serum globulin.

A solution of the stain NaCl N/1 is made of strength of about 1-100.

The reagent is employed by the same technic employed in finding albumen in urine by HNO_3 test. The serum is run under the solution of the blood stain; if the stain is due to human blood a precipitate occurs at the line of contact in a few minutes, and settles to the bottom of the test tube in about twenty to thirty minutes.

The following should be obtained to check and substantiate results:

The serum must give precipitate with known human blood;

The serum must not give precipitate with other bloods available;

The serum must not give precipitate with Na Cl N/1 solution;

The serum must not give precipitate with rabbit's blood;

The human serum must not give precipitate of itself alone;

Serum of another rabbit, not humanized, must give no precipitation with human blood, or with the solution of the stain.

Then if the serum gives precipitate with the solution of the stain we may say positively that we have the albumen of human blood to deal with.

The paper was discussed by Drs. Patek, Burgess and Wendstrand.

HOYT E. DEARHOLT, M. D., *Secretary.*

ASSOCIATION OF CLINICAL ASSISTANTS OF WILLS' EYE HOSPITAL OF PHILADELPHIA.

At the meeting of the Association held February 1, 1905, Dr. Helen C. Upham read a paper calling attention to the *absence of examinations for color-blindness in motormen and conductors* on suburban trolley lines. It was pointed out that many of the accidents occurring could be prevented by proper color signals recognized by the motormen. The colors red and green especially, she said, should be recognized by them. The tests should not be made with wools or colored miniature lights, but under the actual conditions on the road and under atmospheric conditions.

In the discussion, Dr. J. Hiland Dewey reminded the members that many of the accidents on a road occurred not as a result of color blindness, but by an ignoring of the danger signals through carelessness of those who are responsible. Dr. John T. Krall thought that no matter if some employes were careless, and caused loss of life, care should be taken in selecting only those who had full acuity of vision in each eye and normal color perception in both eyes. The examination should be made only by those who are known to have normal color perception. He believed that the whole subject of examination of trolley car employes was a very important one.

Dr. James A. Kearney presented a case of *ulcer of the cornea* in which dilatation of the pupil had not been obtained until eserine had been used for a week, followed by atropine.

Dr. Dewey exhibited five pieces of wood which he had removed from the orbit of a child. Each piece measured about a centimeter long and ranged from one to three millimeters in diameter. The only history obtainable was that the child had run a stick against the eye while playing. The pieces were found situated between the eyeball and the outer wall of the orbit, deeply imbedded in the orbital tissues. At the time of presenting the paper the eye was in a healthy condition and the orbital wound had healed nicely. Dr. Robinson commented on the similarity in length of the various pieces, and the remarkable amount of wood which had been stored in the orbit of such a young subject.

CURRENT LITERATURE.

Gastric Cancer.—G. W. McCaskey (*Journal A. M. A.*, April 1, 1905), points out that in the early diagnosis of malignant gastric disease there is no single symptom or analytic finding, the presence of which is diagnostic or its absence exclusive. The same is perhaps true of any combination of several symptoms, still the diagnostician is not entirely at sea. A thorough study of each case as to the disturbed gastric function, its duration, development, etc., is essential. The external physical examination would be presumably negative. Examination of stomach contents before breakfast, both chemical and microscopic, may afford aid. The presence of lactic acid, of the Oppler-Boas bacillus, of gastric catarrh, or broken-down blood cells are all more or less significant. Then the digestive processes should be studied. The presence or absence of HCl and its amount, if present, the intensity of the biuret reaction or its absence and the presence or absence of the various enzymes are salient points here. All these may strengthen or dispel suspicion, but the patient should be kept under critical study and treatment, the therapeutic tests being of the utmost importance. McGaskey thinks that gastrectomy should be the operation of choice as affording a longer chance of life. If we are ever to get the better of gastric cancer it will be when the internist learns to suspect the condition early and has the courage to act on the suspicion before it becomes a certainty.

Splenomedullary Leukemia.—E. J. Brown and C. M. Jack, Decatur, Ill., reported in *The Journal A. M. A.*, March 26, 1904, a case of splenomyelogenous leukemia symptomatically cured by X-ray treatment. In *The Journal A. M. A.*, March 25, 1905, they report the final outcome of the case with autopsy findings. In the fall of 1904 the patient began to grow weaker, the spleen enlarged again and he finally succumbed with typhoid-like symptoms just sixteen months after first coming under observation. The macro-

scopic examination showed a somewhat enlarged spleen, some kidney lesions and no special gastrointestinal abnormalities. The pathologic examination showed a marked fibrosis of the spleen, with a general picture of splenic anemia, no evidence of leukemia in the intestines or lungs, extensive deposits of lime salts in the kidneys, involving especially the convoluted tubules, and the lymph glands showed a lymphoid hyperplasia resembling that of lymphatic leukemia, these being the only pathologic findings suggestive of leukemic disease. Dr. A. S. Warthin, of Ann Arbor, who made the pathologic examination, remarks that the only conclusion justified by the findings would seem to be that the X-ray treatment had resolved the leukemic condition into an aleukemic state, but that the essential disease process, as shown by the lymph glands, was still active. The leucocytes have been removed from the general circulation and from the areas of infiltration, and the splenic changes seemed to be secondary. The remarkable condition in the kidney offers room for some speculation as to the source of a toxin such as might result from very extensive destruction of leucocytes. No specimen of bone marrow was secured.

Treatment of Idiopathic Epilepsy.—D. R. Brower (*Journal A. M. A.*, March 25, 1905), says that spontaneous cure of this disease is possible, and mentions one of several cases in his observation. He calls attention to the necessity of more care as to the prevention of the trouble, especially in infants suffering from convulsions. The proper treatment and environment in these cases may prevent the later development of the disease. The treatment of the individual convulsions is also important, and the aura may afford a warning that enables the patient to abort the attack. He advises the carrying by epileptics of nitrite of amyl pearls for this purpose. Other methods may also be effective in special cases. In epilepsy there is an auto-intoxication, usually of gastro-intestinal origin, and the diet should be carefully regulated. These patients are usually very hearty eaters and it is advisable to restrict the diet in quantity, to regulate periods of eating and to insure thorough mastication and digestion. Intestinal elimination must also be attended to, and for intestinal antisepsis he finds salol combined with phytolacca often very useful. For combating the nervous irritability the bromids are most useful and he prefers the sodium salt. Their overuse, however, is dangerous, and Brower refers much of the existing epileptic insanity to this cause. The dose should seldom exceed sixty grains daily in plenty of water after eating, and he sometimes adds fl. ext. of *Solanum carolinense* in ½ to 3 dram doses to the bromid mixture. Strychnia is also a valuable remedy for meeting the circulatary and vasomotor defect, and he specially recommends fluid extract of *Adonis vernalis*. Cerebral sclerosis calls for alteratives. In conclusion he insists on the importance of allowing plenty of time, at least five years after disappearance of symptoms, before claiming a cure of epilepsy.

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ORIGINAL ARTICLES.

STOKES-ADAMS DISEASE.*

BY CHARLES H. STODDARD, M. D.,
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In spite of the rather frequent mention in the later medical literature of the symptom-complex of Stokes and Adams, and in spite of the fact that during the last twenty or more years undoubted cases of the condition may be identified from their descriptions in clinical reports, but little attention has been given the subject by the profession at large. Our text-books almost without exception ignore the trouble, and even so thorough a work as Allbut's System of Medicine dismisses it with a line or two.

I feel justified, therefore, in presenting the subject to you with the hope that my notes of a case and a summary of the later conclusions as to causation, may prove to be not without interest.

History.—The patient was an elderly woman in comfortable circumstances, who had raised a large family and who, during her long life of seventy-four years, had never experienced serious illness. Careful questioning failed to reveal a history either of attacks of stenocardia or of cerebral crises, although during the few months immediately preceding the onset of the seizures about to be described, she had had slight attacks of vertigo. Digestion had always been fair and any present difficulty may well be ascribed to the changes of old age, and to those alone.

Present State.—The patient was well nourished and showed no more perhaps than her actual number of years. The complexion was clear, possibly slightly anemic and her mind seemed to be, in the

*Read before the Milwaukee Medical Society, March 28, 1905.

intervals between the attacks, perfectly clear and intelligent, with memory as good as is common in people in their seventies. Muscular strength was fairly good, and symmetrical; there were no areas of anesthesia, nor was there any impairment of the location sense in the limbs. Eye symptoms were not significant, consisting of the usual arcus senilis and the degree of presbyopia corresponding to her age. Pupillary reaction was normal. The reflexes were slightly impaired. Examination of the heart showed a normal percussion area with a slightly diffuse apical impulse as transmitted to the chest wall. When examined during an attack the rate of pulsation was found to be between 30 and 40 to the minute and the first sound of the heart was somewhat indistinct. There was also an occasional intermission of perhaps two beats to the minute. The sounds at the base were not unduly accentuated. The urine was in all respects normal both during and between attacks.

This patient was first seen by me at about 3 A. M., July 13, 1899, and a description of this attack may well apply to any one of seven similar ones which occurred during the succeeding eighteen months while she was under my care.

When called by the patient's son he told me his mother had been taken with an apoplectic stroke which came on during sleep. A daughter sleeping in the same room had been awakened by the loud stertorous breathing of her mother and on striking a light, found it impossible to rouse the old lady.

My first impression of the case was a peculiar one, the coma with slow small pulse indicating rather a state of cerebral ischemia than one of congestion. There were no paralyses present and the attack was clearly what I have since learned it to be, a pseudo-apoplectic seizure such as accompanies bradycardia, the two constituting the dyad of symptoms known as Stokes-Adams disease.

During this attack and at least one of the succeeding ones, the respiration was of the Cheyne-Stokes type, and there was also a condition of anisochoria or inequality in the size of the pupils. Other attacks of equal or less severity, lasting from three to ten hours, occurred on December 26, 1899, on May 26, August 3, and September 9, in 1900, and on January 9 and 26 in 1901, each being treated by the apparent indication present for the use of vaso-motor stimulants. Nitrite of amyl or nitroglycerin were used, followed by doses of the aromatic spirit of ammonia and elevation of the foot of the bed with warmth to the extremities.

In each of these attacks the pulse was below 60, never less than 30 to the minute, while in the periods between attacks, though slow, it seldom went below the minimum normal limit of 60, at times reaching 68 or 70.

The patient is still alive after a lapse of five years, though since my removal to another part of the city I have lost track of her, and as to the subsequent history and frequency of attacks, I am uninformed. All of these attacks occurred after retiring at night, with the exception of one on which occasion the patient fell while descending the cellar stairs and received a small scalp wound.

In 1827 Adams of Dublin described a case of this condition, and in 1846 Stokes reported several similar ones, all occurring, however, in cases of fatty heart. Between that time and 1893, when Huchard in his *Traite des Maladies du Cœur* described his cases and gave them the present name, the condition had been given no systematic study, though as stated, one may readily recognize it among those reported at various times as cases of slow pulse. The disease, if such it can be called—for the anatomic lesions are not constant nor the etiology uniform—is by no means an infrequent one. While the grouping of a set of symptoms not having a common nor a constant anatomical causation, and the crystallizing of them in our minds into the concept of a distinct disease entity, should as a rule be deprecated, in this instance no inconsiderable light has been thrown on the subject of cardiac physiology and pathology by the increased notice directed toward this most peculiar set of phenomena.

Osler's classification of symptoms and types given in the *Lancet*, July, 1903, is here quoted. He gives as characteristic of the condition: (1) profound disturbance of the mechanism of the heart as shown by true bradycardia, false bradycardia, or allorrhythmia; (2) nervous symptoms: vertigo, syncope, pseudo-apoplexy and epileptiform attacks. (3) Secondary symptoms: Cheyne-Stokes respiration; angina pectoris and the vaso-motor accompaniments of profound cardiac shock. He divides the cases as to etiology into: (1) Physiologic; and mentions certain races, as the Bretons, some families, and occasional individuals in whom in a degree slow pulse seems to be the normal state. Napoleon is often spoken of as having normally a pulse rate of 40 and also to have had epilepsy. From this the conclusion is drawn that he must have had Stokes-Adams syndrome.

(2) Neurotic; resulting from organic diseases of the brain, cord or nerves; tumors; meningitis; nervous debility; melancholia; hypochondriasis and neurasthenia.

(3) Toxic: (a) organic poisons (lead), (b) bacterial poisons (diphtheria and typhoid), (c) vegetable poisons (digitalis, tobacco, muscarin), (d) metabolic poisons (jaundice, uremia, puerperal condition and prolonged exertion).

(4) Cardiac and cardio-vascular. This latter constitutes by far the largest of the four groups and among them my case is to be classed. They may ensue from valvular diseases of the heart, notably aortic stenosis, and of this variety Babcock in his recent book on Diseases of the Heart gives a well studied instance.

They may be myocardial and arterio-sclerotic, either alone or in combination, but the cases of the most interest at the present time

are those in which lesions of the cardiac septum have been discovered post-mortem.

Perhaps the most thorough and exhaustive studies on the subject of Stokes-Adams symptom-complex have been made by Huchard in Paris, by Hoffman and Jacquet in Germany, and by Prentiss and Edes in this country. The few cases recorded in which this coincidence of symptoms seemed to depend upon definite anatomical findings are exceedingly significant.

Luce reports a case which seemed to be caused by a primary sarcoma of the ventricular septum, and Bassoe of Chicago found a case in which fibrosis of the septum occurred. He also collected from the older literature two cases of similar origin, the one due to aneurism of the septum and the other to a fibrosis. In Luce's case there was a bilateral degeneration of the vagi up to the medulla, but leaving their nuclei unaffected. The explanation of these cases seems to lie in the supposition that the vagus fibres cross in the septum ventriculorum and that a lesion in that location cuts them off. The accelerator fibres may also be affected in like manner.

There is no evidence either clinical or experimental to show that continued stimulation or irritation of the vagus will cause a permanent slowing of the pulse, though within certain limits and for brief periods such is its function. Dehio says that as atropine is known to paralyze the inhibitory fibres of the vagus from one end to the other, if given in a case of slow pulse dependent upon intracranial lesions which irritate the vagus, it quickens the pulse materially, but that in cases of permanent slow pulse it produces only a slight effect or none at all. He remarks that it is singular that this well-known property of atropine should not have been utilized before in diagnosis.

Edes says there can be but little doubt of the existence of one group of cases dependent upon a paralyzing lesion of the augmentor fibres within the cord, and it has been known for years that almost invariably a slow pulse intervenes in cases of dislocation of the cervical vertebræ.

Neuburger and Edinger report an interesting case in which the syndrome was produced in a man where on post-mortem an almost complete absence of the right half of the cerebellum was found; there was also a narrowing of the pons on the right side, while the restiform and olivary bodies of the left side were smaller than on the right. The fibres in the right vagus nucleus were almost absent and in the region of the decussation of the pyramids was a varix compressing the upper roots of the accessorius. When this varix became engorged with blood during defecation the Stokes-Adams attacks came on.

From these few cases now at hand where the lesions are easily determined, the assumption of the myogenic automatism of the heart seems to be confirmed, and the further inference is drawn that the altered pulse rate must be due to changes occurring in the heart muscle. Such changes may be consequent on arterio-sclerosis, toxemia or fatty degeneration.

The essential feature of the Stokes-Adams complex is the bradycardia, the other symptoms being unquestionably dependent upon the effects produced thereby on the cerebral circulation with the alteration of blood pressure which follows. One thing remains unexplained, however, and that is the mechanism of the separate attacks.

The cases quoted while representing but a single type of the affection may aid in explaining the production of the symptoms in those other cases with no demonstrable gross lesions.

It is desirable that all cases where recognized should be very carefully studied and very careful autopsies made in those which die. The diagnosis is not difficult and with the increasing number of cases being reported much light may be expected in the near future on a condition the nature of which is at present largely conjectural.

THE RADICAL TREATMENT OF CANCER OF THE STOMACH.*

WITH REPORT OF TWO CASES.

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The radical treatment of cancer of the stomach can only mean what the radical treatment of cancer implies in other parts of the body—surgical removal of the primary growth, together with any tissues that may have become secondarily affected. There is no medical treatment of cancer other than alleviation of symptoms, and even in the palliative treatment surgical intervention may be of the greatest service, as, for example, in the relief of conditions due to pyloric obstruction by gastroenterostomy, or of obstruction at the

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esophageal orifice by gastrostomy, or the establishing of a permanent channel for the introduction of nutriment into the organ.

In this paper, however, I shall try to confine myself to the consideration of that class of cases in which the safe removal of the cancer-bearing portion of the stomach is still possible, and to touch upon the palliative operations only as it may be unavoidable in defining the indications for, and limits of, the radical procedure. If any of you should doubt the propriety of bringing this subject before a society consisting almost entirely of general practitioners, I need but remind you that if any permanent good is to be accomplished in these cases, the opportunity for bringing it about lies largely in the hands of the general practitioner, for it is he to whom the patient will first apply for advice, and on whom therefore devolves the responsibility for the prompt recognition of suspicious symptoms and the proper guidance of the patient. I am only repeating what has been so often asserted and emphasized by men whose wide experience and mature judgment enables them to judge correctly and speak with authority, when I say that the hope of future improvement in the statistics of gastric cancer must rest upon earlier diagnosis, and the possibility of this in turn, will, in the majority of cases, rest with the family physician. When the latter shall have learned to suspect malignancy in every case of protracted digestive disturbance which does not yield to the ordinary methods of treatment, and when as a consequence, every available means of diagnosis shall be brought to bear upon the case; when furthermore, the internist and general practitioner shall have ceased to regard every case of gastric cancer as necessarily fatal and beyond all help medical or surgical, and recognize the fact that modern surgery offers some hope not only of alleviation but cure, and shall advise prompt recourse to the only possible means of relief, then the statistics of the operative treatment will no doubt become greatly improved, although even now they are not so completely discouraging as is too generally supposed.

While even in comparatively advanced cases the conditions may not be altogether discouraging for operative relief, as I hope to show by a case reported below, there can be no doubt but that early diagnosis and prompt surgical intervention are essential for obtaining the best results possible.

In order to rightfully claim for an operative procedure the attention of the rank and file of the profession, several requirements must be fulfilled: 1. The possibility of diagnosis sufficiently early to lead to the proposed procedure before the disease has passed the point of curability. 2. The feasibility and safety of the operative procedure.

3. The prospects of relief, which must be either permanent or of sufficient duration to warrant the risk and inconvenience of operation.

1. Diagnosis: While an exact pre-operative diagnosis of all the conditions present is probably never possible, and while almost invariably some surprises await the surgeon on opening the abdomen, I am nevertheless of the opinion that the proper exercise of all the means of diagnosis now at our disposal, will in the great majority of cases lead to conclusions essentially correct. In many cases the diagnosis will remain doubtful until the abdomen has been opened, and in a small proportion of cases even the direct inspection and palpation of the affected tissues will leave the surgeon in doubt whether he is dealing with a malignant or benign neoplasm or with conditions consequent upon chronic inflammation. In the latter exigency the patient must be given the benefit of the doubt by assuming malignancy. The complex of symptoms which suggest malignant disease of the stomach is well known, and as their detailed discussion would require far more time than I can think of occupying, I will merely emphasize that everything pertaining to the patient's past and present condition must be carefully elicited and considered, especially any history pointing to the previous existence of gastric ulcer. The physical means of examination, including the use of the stomach tube and air inflation should be carefully applied. Chemical and microscopic analysis of stomach contents are often of value in confirming the clinical diagnosis, but, as has often been pointed out, a negative finding in the laboratory should not be allowed to undo or set aside the diagnosis made on well marked clinical data, for it has been well said that if the diagnosis is not made until all these tests correspond it will often be too late for successful treatment.

I desire to call special attention, however, to some recent publications by Boas, Hartmann and others, announcing the application of the ozone and guaiac test for blood in the detection of what they term "occult" blood in the stools. By this is meant blood which cannot be detected macroscopically or microscopically, but responds even in minute amounts and after complete decomposition to the test mentioned. These observations have been confirmed by several other investigators and it seems as if at last there had been found a reliable and simple process for clearing up the diagnosis not only of cancer, but of ulcer of the gastro-intestinal canal as well. Technique of the test: All meats, including fish, are avoided for several days before the tests are begun, and the stools made soft by some mild laxative. Two or three grams of stool is mixed with 20 cc. of water and extracted with 20 cc. of ether to remove the fats. This mixture is extracted

with one-third its volume of acetic acid and thoroughly shaken. Ten cc. of ether is then added and the mixture again shaken. If then the ether does not rise to the top in a short time, the process can be hastened by adding a few drops of absolute alcohol. To 2 cc. of the ethereal extract is then added 10 drops of freshly made tincture of guaiac (resin of guaiac 1, absolute alcohol 25), with 10 to 12 drops of old ozonized oil of turpentine, the latter added drop by drop. All utensils must be perfectly dry. If blood is present an intense blue color will appear in a few minutes, changing gradually to a reddish violet tint. A green or greenish-blue color does not indicate blood. Contact with the skin of the hand must be avoided, as the fatty acids of the skin would simulate the blood reaction. Pure oil of turpentine, ozonized by exposure to the air for eight weeks, should be used. Pure solution of peroxide of hydrogen may be substituted for the turpentine, the same proportions being used.

As a control reaction Boas recommends Klunge's aloin test. Shake up as much aloin as will rest on the tip of an ordinary laboratory spatula with 5 cc. of 70 per cent. alcohol. Mix 5 cc. of acetic acid and ether extract, prepared as above described, with 20 to 30 drops of ozonized turpentine and then with 10 to 15 drops of aloin solution. If blood is present, a bright-red color appears which turns to cherry-red on standing. Boas considers this aloin test the better one, as it is not influenced by the presence of fats or fatty acids. The addition of a few drops of chloroform will hasten the color changes.

Boas, Hartmann and those who have tested the method claim that the stools of patients suffering with cancer of the gastro-intestinal canal *always* contain blood in the occult, if not in other form; that in ulcer it is present *intermittently* and ceases within a few days after a strict milk diet has been adopted; that it may be *occasionally* found in cases of organic and spastic pyloric stenosis; and *never* in cases of acid, anacid or subacid gastritis, hyperacidity, hypersecretion, neurosis or benign dilatation. It can be readily seen that if these claims can be fully substantiated, we have in this test a sure, ready and simple means for determining the question of malignancy, though not of the location of any growth involving the gastro-intestinal tract.*

Having reached a fairly certain positive diagnosis, or if after exhausting all available means of investigation a decision cannot be reached, we should not hesitate to advise immediate exploratory abdominal section; before this is done all preparations for radical work must be complete, so that the latter may be carried out at once, if indicated.

(*See *Progressive Med.*, Dec., 1904; *Deutsche Med. Woch.*, No. 47, 1903; *Arch f. Verdauungskr,*. Vol. 8, No. 1, 1904.)

In the early recognition of suspicious symptoms and consequent early exploratory laparotomy we have the key to improvement in the results of the surgical treatment of those cases. In case the conditions found do not warrant radical work, a palliative operation can usually be done, or if this, too, is contraindicated, the abdomen is closed with non-absorbable suture material and the patient returned home after a few days, none the worse for the exploratory operation.

2. In considering the question of the feasibility and safety of the operation we must take into account, first, the anatomic relations of the structures involved, especially the course and distribution of those lymphatic channels and glands which are liable to become the seat of the first foci of secondary infiltration, and second, the statistics of the operative mortality. So far as the more or less extensive removal of the stomach is concerned, the anatomic conditions are such that it offers no great technical difficulties; probably no other major operation can be performed with less loss of blood than ordinarily ensues during a gastrectomy. Unless but a very small stump of stomach is left, anastomosis between it and the jejunum is not more difficult than in an ordinary gastro-jejunostomy. The absence of hemorrhage and of the necessity of much handling of the small intestines and omentum account for the comparatively mild degree of shock usually found on completion of the operation, though this necessarily consumes considerable time. The danger of primary infection is avoided by carefully packing around the field of operation, exercising great care in preventing contact of stomach contents with the tissues, and the use of the thermocautery instead of knife or scissors in making the section of the stomach and duodenum. Primary infection seems to have caused but an insignificant percentage of the operative mortality, while on the other hand, leakage is responsible for about 50% of the fatalities. The latter fact is easily understood when we consider the extensive suturing required and which must be done with reasonable speed. The time at which leakage is most likely to occur is from the 5th to the 7th day, a period at which there seems to be the minimum of resistance in the tissues. The general operative mortality up to this time is in the neighborhood of 28 or 30%. With increased experience and improved technique the operative mortality will without doubt be more and more reduced in the future as it has been in the past.

As to the removal of the lymphatic channels which drain the diseased area, and of the first series of glands or nodes into which they empty, recent research has shown that the anatomical conditions here, too, are in our favor, inasmuch as we can remove the lymphatic struc-

tures of the lesser and greater omentum, and it has been found unnecessary to remove all of the fundus to avoid recurrence from a cancer of the pyloric portion. For the very interesting recent literature of this subject I refer you to the publications of Cuneo, Hartmann and others. Probably the most important result of these researches is that they show the safety of leaving a large portion of the fundus when not directly involved, which means in nearly 95% of cases,—nearly all having their seat in the pyloric region or its vicinity in the lesser curvature. Generally speaking, the anatomical conditions in the stomach and the lymphatics which drain it, may be said to compare very favorably, so far as surgical removal is concerned, with those existing in the breast and uterus, and more than favorably with the conditions met with in case of cancer of the rectum.

3. This brings us to the most important question to be considered, *viz.*, that of the proximate and ultimate results of radical treatment—in other words, what good does it do? Here a brief reference to statistics is unavoidable, and in applying these it should be borne in mind that up to a very recent time the operative technique was very unsettled, the operative intervention being unnecessarily extensive in some cases, while in others it did not encompass the adequate removal of diseased structures.

Murphy's resumé in 1903 (Practical Medicine Series) reports 17 out of 189 patients who underwent gastrectomy for cancer and are alive after three years, about 8%. In this series the operative mortality was only about 13%. Some recurrences will in all probability be found after a lapse of three years, but this will no doubt be more than counterbalanced by the better results of more recent operations, as the last three years have brought great improvement in operative technique. In case of recurrence an average period of 14 months is added to the patient's life as compared with those not operated upon. That much improvement in results will follow when patients afflicted with gastric cancer shall be given the benefit of as early surgical treatment as are those with similar disease in the breast and elsewhere, can be confidently predicted, and there is no apparent reason why the results should not in time compare favorably with those obtained by operations in other regions. Cancer is, and probably always will be, a destructive and fatal malady, and does in no case offer a very encouraging field for the surgeon, but as long as some good results follow our efforts in the fight against a disease otherwise invariably and rapidly fatal, we have no moral right to throw up our hands and refuse to do that which may offer the patient a possible chance. Progress and success can be expected only if a hopeful and

progressive spirit is maintained. Even a very small percentage of cures is better than none at all.

My experience in the radical operation for cancer of the stomach comprises two cases which I herewith report, first, that they may go on record, for every case, whether the outcome be favorable or unfavorable, should be reported; and second, to illustrate by means of their histories some important clinical phases of the diagnosis and pathology of the disease.

CASE 1. H. K., aged 31 years, farmer, native of Germany. Family history negative. Mother died at age of 45, cause unknown, except that she had "dropsy." Patient never had any serious sickness until his present ailment began. No history of dyspepsia or colic up to that time. First examination April 29, 1904. The first symptom, noticed during the summer of 1903, was pain to right of median line just below costal border, felt on riding. By November, 1903, he felt this pain constantly. At the same time his appetite became poor, tongue coated, the stools colorless and tough, and the urine brown. There were no attacks of severe pain. Jaundice was noticed during January or February, 1904, and lasted about four weeks, then disappeared and has not returned, and the stools have since then been of a dark-brown color. Vomiting began in November, 1903, and always occurs during the night, as a rule after he has reclined for about an hour, and never in the day-time, except on one occasion about a week ago, when he had two vomiting spells in one day. At this time he first noticed that the vomited material resembled coffee grounds. He has never vomited fresh blood. As a rule there is no nausea except shortly before the vomiting. The vomited material is of a very foul and offensive odor. He is also subject to bitter, burning eructations, but no hiccough. Lately he vomits more than once a night. Has lost fully thirty pounds in weight. Bowels at times constipated, no diarrhea.

Present condition. The patient is a man of medium height and spare build, his highest weight during health having been 153 pounds. Skin and hair very dark, which perhaps added to the cachectic appearance, which is extreme. Sclera clear. Tongue thickly coated and breath very foul. Large, hard but movable tumor in the right half of the epigastric region extending into the right hypochondrium, just below the normal seat of the gall bladder. The tumor moves distinctly up and down with the movements of respiration; it is slightly tender on pressure and the seat of steady though not severe soreness. The use of the stomach tube brought forth several pints of decomposing foul food remnants, and secretions, of a distinctly "coffee-ground" character. Marked dilatation was further shown by careful air inflation, the lower border of the stomach reaching nearly to the umbilicus. Air inflation did not alter the position or relations of the tumor. Examination after a test meal showed the absence of free HCl, the presence of lactic acid and long (Oppler-Boas) bacilli. The tests for pepsin were omitted. The blood examination showed 68%

hemoglobin, 3,990,000 reds, and 11,200 whites. Urine normal. The diagnosis of cancer of the pyloric portion of the stomach, with obstruction and dilatation could therefore in this case be made with a considerable degree of certainty, the only question as to the possibility of radical operation depending upon the involvement of neighboring structures; the free mobility of the large growth made this unlikely, and this view was fortunately fully borne out at the operation.

Operation May 4, 1904, at Milwaukee Hospital. Careful preparations as to diet, bowels, skin and mouth were carried out for several days previously. Rectal infusions of normal salt solution were given to fill up the blood vessels and supply the system with abundant fluid. Pulse before operation, 72; temperature, 98.2°. A short incision was made close to the right of the median line midway between the ensiform cartilage and umbilicus, and finding upon exploration that the conditions were favorable for a radical operation, the incision was enlarged and more than half of the stomach removed, following with a posterior gastro-jejunostomy. The technique recently described by W. J. Mayo was followed in nearly every detail. The sections were made with the actual cautery, and celluloid thread used as suture material. About one inch of the duodenum was removed and all of the stomach as far to the left as the Mikulicz-Hartmann line. The Doyen clamps were used, no larger ones being available, and were found quite satisfactory. No special device was used for the gastro-jejunostomy, and the sutures consisted of one course of through-and-through Ford sutures and one course of Cushing's. The abdomen was closed by alternating through-and-through and figure of 8 sutures, without any drainage. The patient stood the long operation surprisingly well, and the subsequent course of the case was uneventful. The pulse on completion of the operation was 90; on the second day it ran up to 130-140, and the temperature rose to 102.8° F., but from the third day on both remained very satisfactory. There was little nausea and absolutely no vomiting. Hot water in small quantities was given by mouth as soon as he was able to swallow, to which was soon added liquid peptonoids and later bovinine or red bone marrow; rectal feeding was continued for nearly two weeks. All sutures of the abdominal wall were removed on the 8th day, healing being complete. About the same time he began taking semi-solid food and on the 10th day took some baked potato and bread. He gained rapidly in strength and left the hospital May 23, 19 days after operation. June 6, two weeks later, he writes: "Have gained 14 pounds in 13 days, appetite good, feeling well." July 14, about 7 weeks after operation, he reports a gain of 29 pounds in weight. General condition good. September 29, nearly four months after operation, weighs 151 pounds, which is more than his former average weight, the highest he ever attained being 153. Has been hauling water for a threshing crew for a number of weeks and has done a day's plowing. Eats and digests all kinds of food, appetite good, bowels regular, strength good. November 12, 1904, he called, complaining of slight diarrhea for the last three weeks. This was probably due to indiscretion in eating, as it yielded readily to moderate restriction

of diet. Is free from nausea, pain or distress after eating and has not vomited once since the operation.

The tumor was of the size of an average adult fist, nodular, hard, the entire surface ulcerating, and had caused very nearly complete closure of the pylorus. Microscopically it proved to be an adenocarcinoma, the enlarged lymphatic glands showing secondary infiltration with epithelium of the same character as that found in the tumor.

Several points in the clinical history of this case are of interest. 1. The nocturnal vomiting; this can be explained by the existence of marked dilatation so that while during the day the contents rested in the dependent pouch, in the recumbent position they came more in contact with the healthier cardiac portion of the stomach and caused nausea and vomiting. 2. The upward and downward excursions of the tumor with the movements of respiration. This may lead to the impression that the tumor is attached to the liver, but is a symptom not infrequently noticed in tumors of the stomach. 3. The good results in an apparently very advanced case, which should teach us not to attach too much importance to so-called cachexia, as long as the general condition admits of an exploratory operation.

Case II. Mrs. J. S., aged 54 years, mother of eight children, the youngest 15 years old. Kindly referred by Dr. Nixon and admitted to St. Mary's Hospital, Nov. 9, 1904. Family history negative, except that mother's mother died of cancer of the breast. Patient passed the climacterium at 52 years. She considered herself well until ten years ago, since which time she has had occasional attacks of pain in the right side of the abdomen, which were considered attacks of ovarian neuralgia, but in the light of present investigation appear to have been gall-stone colic. During the last eight or nine years she has been subject to palpitation and at times to pain in the region of the heart, probably attributable to organic disease, the presence of which is indicated by a distinct systolic murmur. During the last six months she has been partly confined to bed, owing to heart disturbance, general weakness and bronchial catarrh. During this time her appetite has been failing, more especially of late. Six weeks ago she began to have nausea and about the same time had a severe gastric hemorrhage; there were four vomiting spells in one hour, expelling about two quarts of contents, mostly blood. Since that time there has been more or less nausea, but only one slight vomiting spell a week ago, with no blood. The stools have been dark colored since the hematemesis. Solid food causes distress. There is slight tenderness in the region of the stomach, but no spontaneous pain. Riding causes marked pain in the back. Bowels were constipated until regulated by medication. During the last few weeks she has lost noticeably in weight and strength, the loss in weight estimated at 50 pounds (during health she weighed 230 pounds, with a height of 5 ft. 2 in.).

Present condition: Patient is obese in spite of reported loss of weight, the skin pale and flabby, but not jaundiced or cachectic. Epigastric region not distended or unduly full; in the right part of the epigastric region a hard, smooth, globular tumor could be felt, very movable, and following to some extent the upward and downward movements of the liver; pressure on the tumor caused slight nausea. The first impression this tumor gave every examiner was that of a movable kidney, but the latter could be excluded by the range of excursions, as it could be pushed clear up below the ensiform cartilage, but would not recede into the region of the kidney. The use of the stomach tube showed no retention, and dilatation was excluded by the inflation method; neither did the latter change the relations of the tumor.

Examination of stomach contents: Total acidity, 1.8%. No free HCl. No butyric or lactic acid. Oppler-Boas bacillus present. No blood. No blood found in feces (microscopically.)

Blood examination: Hemoglobin, 75%; red corp., 4,440,000; white corp., 12,478. Urine normal.

Clinical diagnosis: Cancer of pyloric portion of stomach without obstruction or dilatation.

Operation, Nov. 15, 1904, at St. Mary's Hospital, Milwaukee.

After incision the large mass of the tumor felt before operation was found to be the gall-bladder, distended so as to measure 6 or 7 inches in length and 3 to 4 inches transversely, tensely filled with a perfectly clear viscid fluid, its walls attenuated, so that it had a deep bluish appearance, and free from adhesions. A single large gall-stone could be felt impacted in the cystic duct. Further examination showed a nodular mass located in the lesser curvature of the stomach, close to but not involving the pylorus. Gastrectomy was first performed, the technique varying but little from that employed in Case 1, except that the section through the duodenum was made immediately after ligation of the lesser omentum; this was done to mobilize the stomach and to gain better access, as the obesity of the patient rendered every step of the operation unusually difficult. In order to save time, as the operation on the gall-bladder was to follow, and to facilitate the anastomosis between the small remaining stump of the stomach and the jejunum, a Murphy button was used in making the gastro-jejunostomy. Complete cholecystectomy seemed inadvisable on account of the very broad attachment of the gall-bladder to the liver; a partial resection of the gall-bladder was therefore made, the stump fastened in the abdominal wound and drained. As the calculus could not be otherwise dislodged it was cut down upon and removed and the small opening closed with silk sutures. The abdominal wound was closed except at the point of gall-bladder drainage.

The subsequent course of this case, although not as calm as in case one, was satisfactory until the second half of the 7th day, when symptoms of leakage and septic intoxication suddenly supervened, of which the patient died at the end of the 8th day. Post mortem examination showed a small perforation on the posterior wall of the stomach close to the side of the Murphy button. Whether this had been

caused by a small necrosis of tissue, or by the slipping of part of the tissues included between the shoulders of the button, I was unable to determine.

Macroscopically the tumor consisted of a lobulated mass, measuring 2½ to 3 inches in all diameters. Microscopically it proved to be a large round-celled sarcoma.

In the clinical history of this case you will notice particularly the *absence* of vomiting. Only at the time of the hemorrhage, and once subsequently, did it occur. It is not difficult to see why a tumor, situated along the lesser curvature alone, may exist for a long time without causing nausea or vomiting. While the outcome in this instance was an unfortunate one, the patient's condition for nearly a week following the operation fully bore out the admissibility and safety of the operation even in cases affected with organic heart disease and bronchial catarrh. The cause of death was an accident liable to undo our work in any simple operation upon the hollow viscera—leakage or perforation.

In both cases there was the coincidence of a history of biliary obstruction and gastric cancer—material for thought and for further observation and study.

Both patients were kept in an almost sitting position after the operations, and were given sips of hot water, as soon as they were able to swallow, the amount being gradually increased.

As a kind of summary I will submit for your discussion the following propositions, not all of which have been elaborated in the foregoing remarks, but in which I believe is expressed the best thought and teaching on the subject of gastric cancer at the present day.

1. Cancer of the stomach is not amenable to any form of curative treatment other than surgical.

2. In many cases the diseased tissues are susceptible of removal by partial gastrectomy, an operation the feasibility and safety of which is now generally recognized by surgeons.

3. The final step in diagnosis in all cases and the only means of definitely deciding the question of the possibility of radical intervention is the exploratory operation.

4. Early diagnosis and the prompt resort to operative treatment in all cases not clearly inoperable, are the conditions for improvement of the results in the future.

5. The burden and responsibility for bringing about the conditions mentioned in the last proposition rest, in the vast majority of cases, upon the family physician.

6. The question of the possibility of permanent cure must be settled by further observation. Results thus far obtained warrant and demand faithful and courageous continuance of the work done in recent years.

AN IMPORTANT POINT IN OUR WARFARE AGAINST TUBERCULOSIS.

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The subject of tuberculosis has, perhaps, received more attention by the medical profession for several years past, than any other. The sanatorium treatment has come to the front, and the lay press affirms that Eastern sanatoria are curing from fifty to seventy-five per cent. of their cases; this statement is partly true, but very misleading.

The reports from these sanatoria are very carefully prepared, and the officials are not responsible for the common error that consumption has suddenly become an easily curable disease. They state that they cure or arrest the disease in fifty to seventy-five per cent. of very carefully selected incipient and slightly advanced cases.

If we were to take cases in all stages, fifteen or possibly twenty per cent. of cures is all we can rightly expect, because fifteen or twenty per cent. of all cases are in the curable stages. The cry has gone forth "that consumption is curable;" but the careful conservative physician adds, "in the incipient stages."

Many advanced cases are cured, sometimes almost miraculous cures undoubtedly occur, but they are the exceptions to a very general rule. This point has long been emphasized, but judging from the class of patients sent by physicians of good standing to all sanatoria that do not have regular examiners, it has not been emphasized sufficiently. It is a sad duty for the family physician to tell the anxious patient that it is useless for him to go to a sanatorium, but it is far more sad for the medical director of such an institution to refuse to admit him after hopes of a speedy cure have been fostered, and at the end of a long and wearisome journey.

The most vital point in the cure of this disease is that the general practitioner shall be skilled in making an *early diagnosis,* and in his ability to convince his patient that he has a silent, invisible, relentless foe to fight, and that it will be a fight to the finish.

In chronic ulcerative phthisis the patient will, in the majority of instances, have more or less marked symptoms, if carefully sought for and interpreted aright, before the bacilli can be detected in the sputum.

We naturally consider the family history first: In one sense it

makes very little difference to the patient whether he inherits the disease, or a susceptibility, a minimum resistance, or a soil fertile for the growth of the germs; in another sense, it makes *all* the difference, for the hope of victory in fighting the "White Plague" lies in the fact that it is not hereditary and hopeless and that the susceptibility can be overcome, the resistance increased, so that the bacilli will not find a soil sufficiently fertile to gain an implantation.

The more we treat this disease, the more experience teaches us to ascertain the correct family history and give it due weight both in diagnosis and prognosis. Instinctively we regard our patient's build, general vigor, form of chest, amount of expansion on full inspiration, and compare the expansion of each side.

When the germs of consumption find lodgement in the lungs, they may and often do affect the functions of nearly every organ in the body. The general strength is impaired so slowly, so insidiously, that patients are not aware of it until they compare their present strength with that of months or even years previous. With this failure in strength there is an equally insidious loss of weight.

There is also a disinclination to both mental and physical labor, general malaise, languor, and shortness of breath on slight exertion. In one-third of all cases the symptoms of indigestion, anorexia, epigastric fullness and flatulence, precede those in the lungs and mask them so that the patient will stoutly affirm that his lungs are all right.

The symptom that has awakened my suspicion more than any other, is that slight irritative cough, a catarrhal condition that comes on without any known cause and persists without any apparent reason, and I might add, is very difficult to differentiate from simple chronic bronchitis. Pain caused by a dry pleurisy or pleurisy with effusion, may be the first symptom, and in this case we may be surprised on examination to find the physical symptoms well marked.

The effect is shown on the nervous system by an unusual irritability, very marked in some instances; on the vascular system, by an irritable heart, and commencing anemia, pallor of the face; some physicians lay marked stress on an anemia of the soft palate and uvula, preceding the general anemia.

When the pulse creeps up and there is a little evening rise of temperature, though slight, our suspicions are strengthened, and when the first caseous nodules break down and the contents connect with the bronchial tubes, the finding of the bacilli in the sputum confirms the diagnosis even though the physical examination reveals but few subjective symptoms. This examination should be thorough and made with the clothing removed from the entire chest; then we can throw

a light flannel cape over the shoulders, with numerous perpendicular slits in it, so that there will not be an undue exposure.

Shall we wait until the diagnosis is thus confirmed before commencing treatment? Certainly not; we should be honest with our patients, and govern our treatment according to the import of the symptoms taken collectively. If they are but slight we can teach them hygiene to be observed at home; if they are marked, then we can advise and insist that everything give place to a thorough and radical treatment.

It has been said that we should always tell our patients when they have consumption. In actual practice it will depend on their age and disposition. One patient is intensely alive to his danger, worried and anxious, willing to make any sacrifice that he may gain his health; another is phlegmatic, easy-going, or positively deaf to our appeals; obviously we should soothe the former and spur the latter by every means in our power.

These little germs, these little enemies to mankind, get in their work so slowly at first, so quietly, so insidiously do they undermine the vital organs, that the warning of the approaching storm must come from the physician, and in most cases, from the general practitioner; this must be done while the sky is still clear, or at least while the cloud is no larger than a man's hand in the patient's sight.

In the early stages the doctor entreats the patient, in the last stages, the patient entreats the doctor. The former entreaties are often unheeded, the latter are always unavailing.

Our results in eradicating the scourge from among us, will depend largely on an early diagnosis, and in the education of the masses to the fact that the early, or incipient stage, is the curable stage.

Immediate Closure of Tracheotomy Wounds.—Tracheotomy wounds are usually treated by the open method. MILES F. PORTER, Fort Wayne, Ind. (*Journal A. M. A.*, April 8), advises instead immediate closure of the wound, provided there is no infection and provided the cause of the dyspnea is clear. He claims that this procedure lessens the danger from pneumonia and from infection in the wound, shortens convalescence and reduces to a minimum the deformity from the scar—a matter of some importance in females. Two cases are reported supporting his views. Although drainage was employed in these cases, he considers it unnecessary, as was also the leaving the trachea wound unstitched in one case. He thinks the latter was a mistake. The results, however, were apparently perfect in both cases.

CRYPTORCHISM.*

BY P. H. JOBSE, M. D.
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The subject of cryptorchism or undescended testicle has not received the attention in our surgical works that the prevalence and importance of the condition deserves.

So recent and so good a work as the International Text Book of Surgery by Warren and Gould makes no mention of the condition, and even the works on genito-urinary surgery leave out the subject entirely, or treat it in a very unsatisfactory manner so far as treatment is concerned. According to the English, German and French military statistics, some form of cryptorchism occurs once in every 500 individuals. A condition causing so much mental distress, a condition followed at times with such disastrous results as gangrene and malignant disease of the testicle, a condition which, as a rule, is accompanied by hernia, and a condition in which surgical intervention is followed by such certain and good results, is deserving of more careful consideration by surgical writers.

Embryology.—The testes, at an early period of fetal life, are placed at the back part of the abdomen behind the peritoneum and a little below the kidneys. At about the third month the gubernaculum testis makes its appearance. This structure is at first a slender band extending from that part of the skin of the groin which afterwards forms the scrotum, through the inguinal canal to the body of the epididymis and is then continued upward in front of the kidney to the diaphragm. As development advances the peritoneum covering the testicle encloses it and forms a mesentery, the mesorchium, which also encloses the gubernaculum and forms two folds, one above the testicle and the other below it. The one above the testicle is the plica vascularis which ultimately contains the spermatic vessels, the one below—the plica gubernatrix—contains the lower part of the gubernaculum, which by this time has grown into a thick cord. It terminates below in a tube of peritoneum, the processus vaginalis, which protrudes itself down the inguinal canal. At about the fifth month the lower part of the gubernaculum has developed into a thick cord and consists of a central core of unstriped muscle fibre with a covering of striped elements.

As the scrotum develops, the lower end of the gubernaculum

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is carried with the skin to which it is attached to the bottom of this pouch. As the pouch of peritoneum—the processus vaginalis—projects itself down the inguinal canal and the scrotum, it carries with it the lower fibres of the internal oblique and some of the fibres of the external oblique, which form the cremaster muscle and the spermatic fascia respectively. The gubernaculum does not grow as do the other parts, but becomes shortened and this assists in drawing the testicle down to the bottom of the scrotum. The testicles reach the internal ring about the sixth month, and enter the canal the seventh month. By the eighth month the testicle has reached the bottom of the scrotum preceded by the processus vaginalis which communicates by its upper extremity with the abdominal cavity. Just before birth the upper end becomes obliterated and this obliteration gradually extends downward to within a short distance of the testicle.

The following abnormalities may occur:

1. The testicle may fail to be developed.

2. The testicle may be developed but the vas may be undeveloped in whole or in part.

3. Both may be developed but there may be no connection between duct and gland.

4. The testicle may fail, entirely or in part, to descend, or it may descend into some abnormal position.

a. It may remain below the kidney, may descend to the internal abdominal ring, may be retained in the canal (the most common position), may remain just outside of the external ring.

b. It may pass the scrotum and reach the perineum.

c. It may find its way through the femoral ring, through the crural canal and present itself at the saphenous opening.

5. The testicle may reach the scrotum but be malplaced.

It may be rotated so that the epididymis is directed forward while the testicle and the vaginal process are directed backward. (Important in puncturing hydrocele.)

6. It may be inverted, so that the vas comes off from the summit of the organ in place of the bottom.

7. The cord may be twisted, completely or incompletely arresting the circulation and causing in the one case atrophy and in the other gangrene.

Dangers of the condition:

1. An actual or potential hernia is practically always present.

2. Greater liability to and greater danger from inflammation of the testicle (inflammation extends to the peritoneum).

3. Greater danger of malignant degeneration. There is no doubt that a misplaced testicle is more often the seat of malignant disease than the normally placed testicle. Finotti says this is due to its embryonic condition.

4. Injury to the organ from its exposed position—both external injury from violence or internal from muscular contraction.

5. Mental distress due to the existence of the condition—an important factor in these patients after they have reached maturity.

6. Atrophy which may be congenital or due to the compression of the circulation by the abdominal muscles or contents of the coexisting hernia, or from the pressure of a truss.

7. Torsion. A misplaced testicle has a peculiar tendency to undergo partial or complete torsion, causing atrophy or gangrene. In gangrene, infection of the peritoneal cavity is almost certain.

Prognosis.—Spontaneous descent of the testicle must not be looked for in any large proportion of the cases after the first year. Testicles that are allowed to remain in an abnormal position do not develop and do not produce fully developed spermatozoa. If the condition is bilateral the individual will almost certainly be sterile. There are a few reported cases which are an exception to this rule.

Treatment.—A truss should never be employed in the treatment of these cases unless the testicle lies within the abdominal cavity. The pressure of the truss is often not only unendurable and liable to cause malignant change in the testicle, but by its pressure is apt to produce an adhesive inflammation around the cord and testicle, anchoring it more firmly in its abnormal position. Then again the pressure from a hernia downward may assist in forcing the testicle into its normal position. Manipulations are not productive of good results, and they may, if applied too vigorously, produce a destructive or an adhesive inflammation, or may cause a malignant change.

Until a few years ago these cases were operated upon only when urgent symptoms were present, and then castration was done. This position is not tenable to-day. Every case of malposition of the testicle should be operated upon and the testicle brought down to its proper position in the scrotum. This is possible in the large proportion of cases. The most important structure in the cord—the vas deferens—descends to a lower level than does the testicle itself, and is found coiled over the vaginal process, and when straightened out it is always of sufficient length. The vessels, if found too short, may be sacrificed. The spermatic cord contains three arteries—the spermatic from the abdominal aorta, the cremasteric from the deep epigas-

tric and the deferential from the superior or inferior vesical. They form abundant anastamoses near the testicle, so that if one is preserved the nutrition to the testicle will not be interfered with. This is proven in almost every operation for varicocele. The deferential artery lies very close to the vas and will always be preserved if the vas is not too closely stripped.

A very important question to decide is at what age to operate. There seems to be quite a difference of opinion on this point. Owing to the fact that some few cases undergo spontaneous descent at puberty French surgeons do not operate until after that time. A testicle will not develop in any position outside of the scrotum, and if the operation be too long delayed the testicle may fail to develop even after it has been transplanted to its normal position.

I personally believe that the sooner after the 4th or 5th year the operation is done, the better the chances of normal development of the testicle. There is practically nothing to be gained and everything to be lost by postponing operation until after puberty. I also believe that in bilateral cryptorchism it is wise to operate on one side at a time. Infection in these cases is disastrous, and if by some chance one's field is infected and the testicle is thereby lost, one still has another chance of giving the individual a normal testicle. If both sides are operated upon at the same time and infection follows, one would probably have both sides infected and a loss of both testicles would be the result.

Anatomy.—The anatomy to be considered is the anatomy of oblique inguinal hernia, and one must be thoroughly conversant with the anatomy to be able to operate with good results in these cases. There is one fact in connection with the descent of the testicle which is of importance and which is generally not known or misunderstood, and that is that long before the testicle descends through the canal, the processus vaginalis has preceded it, and lies in front of the gubernaculum and reaches down into the scrotum. The idea so prevalent that the testicle draws down a pouch of peritoneum which afterwards becomes the tunica vaginalis is an error. We have then in every case either an actual or a potential hernia, the treatment of which becomes a part of the treatment of non-descent of the testicle.

Dr. Arthur Dean Bevan in 1899 developed the following technic which makes it possible, even in cases where the testicle is well within the abdomen, to bring down and retain the testicle in the scrotum. That his important paper has been overlooked is evidenced by the treatment proposed by our recent works on surgery. The technic is as follows:

"Make an incision three inches long over the canal. This should never involve the scrotum, or extend farther inward or downward than the external ring. This incision should divide skin and superficial fascia and the external oblique over the inguinal canal.

"The divided aponeurosis of the external oblique is drawn to each side and the cremasteric fascia is exposed. The cremasteric fascia and the thin underlying transversalis fascia are freely divided parallel with the canal. This exposes the large peritoneal sac which is continuous with the general peritoneal cavity. This sac is opened and the testicle exposed to view. Frequently a projection of the omentum is found in the sac. The peritoneum is then cut across and is carefully separated from the cord which lies beneath. The vaginal process is then ligated, as in the neck of the hernia in a hernia operation, care being taken to ligate well up at the internal ring. That portion of the peritoneal sac in contact with the testicle is closed with a purse-string suture, and thus forms a tunica vaginalis for the testicle. The testicle is now lifted out of its bed, and the cord is gently pulled on, so as to lengthen it as much as possible. In doing this, shortened bands of connective tissue will be seen as tense bands in the cord, and these should be torn across with tissue forceps. The cord should thus be stripped of all the surrounding fascia, leaving nothing but the vessels and the vas deferens. When this has been accomplished, the spermatic vessels and the vas, which lie behind the posterior layer of peritoneum of the abdominal cavity, should be separated from the peritoneum by careful blunt dissection, with the finger introduced into the abdominal cavity. The spermatic vessels will be found passing upward and inward and the vas downward and inward from the internal ring, and this divergence can be plainly seen. The cord should be so lengthened by these maneuvers that the testicle can be laid on the thigh three or four inches below Poupart's ligament.

"With blunt dissection with the fingers a large pocket should be made in the scrotum for the reception of the testicle, and the testicle dropped into it, where it should remain without tension on the cord. A purse-string suture should now be placed at the neck of the scrotum to retain the testicle in position. This suture should pass through the superficial fascia and the external oblique on both sides of the incision; that is, both the internal and external pillars of the external ring, and above the cord. When this suture is tied, the testicle is securely retained in its scrotal pocket. The incision is then closed by bringing the conjoined tendon and Poupart's ligament together over the cord as in Ferguson's operation for radical cure of inguinal hernia. We then suture the incision in the external oblique with continuous suture, and lastly, close the external wound. A fairly firm, not uncomfortable, compress over the canal, retained with spica bandage, completes the operation."

In cases where the testicle cannot be brought down on account of the shortness of the vessels, these structures are doubly ligated and cut between the ligatures as in varicocele operations. The important steps in the operation are freeing the cord from all connective tissue

bands, and separating the vas and the vessels from the peritoneum by blunt finger dissection beyond the internal abdominal ring, and if the vessels are still too short, dividing them as in the varicocele operation. The vas deferens, if separated in this manner, will practically never be found too short.

If the scrotum is not developed a pocket for the reception of the testicle can be produced by sweeping the index finger over the crest of the pubes, and with a boring motion stretch the fibres of the dartos. This must be thoroughly done to paralyze the muscular fibres of the dartos, as they might, by contracting, squeeze the testicle back. Although it is not absolutely necessary, the scrotum can be invaginated and the same suture which was used in closing the vaginal process can be used to anchor the testicle in the scrotum. The soft tissues around the external ring can also be gathered up and stitched in front of the external ring to act as a buffer to the testicle. We can assure the patient or his parents that an operation holds out to him a very good prospect of cure and that the dangers of a properly conducted operation are far less than those of the continuance of the deformity.

COMPLICATIONS OF LABOR AT TERM.*

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In introducing this subject, I do so fully understanding that I shall be enabled to cover only a small fraction of it.

There is something in motherhood that awakens in man the finer qualities of his nature, and as my experience in the obstetric field ripens, it is with greater feelings of responsibilty that I pass the threshold of the lying-in chamber. Two lives are entrusted to our care; perhaps on our judgment and executive ability rests the life of one, or of both mother and the child.

When complications may arise, we do not know; in what form they may come, we have not always the means of telling. For example, a natural labor may apparently be in progress, when suddenly the lips begin to twitch, then the facial muscles, the eyeballs roll, the head is drawn to one side, and a convulsive tremor takes possession of the whole body. Now you recognize an attack of puerperal eclampsia.

Or take another case: Perhaps on your first introduction to your

*Read before the Lafayette County Medical Society, April 11, 1905.

patient you will find pale lips, blanched face, weak and rapid pulse or pulseless wrists, yawning, sighing and quick breathing, cold extremities, sweating, anxious expression, great weakness and profuse hemorrhage from the womb. Is the picture complete? You say "placenta previa." Yes, or it might be a premature detachment of the placenta at its normal site. A condition now confronts us calling for the most prompt mechanical interference, the object of which is to empty the uterus as soon as possible consistent with safety to the mother from operative injury. If the bleeding has been extreme, and great weakness of heart action has resulted, a hypodermic of strychnia 1-50 grain and nitroglycerine 1-50 grain should be given, the one to sustain the heart and the other to dilate the vessels of the brain, by which nervous energy is imparted to the functions of the body, thus enabling nature to better reassert herself in the battle for life. Fluid extract of ergot in good round doses should follow the first prescription, either by mouth or beneath the skin, and transfusion of normal salt solution at once instituted. This must all be done in less time than it takes to tell it, for you are imperatively needed in another part of the field. Should you have a capable nurse, so much the better, for the above measures may be left to her under your directions. Then after due disinfection, you are at liberty to at once prepare to hasten delivery by passing the hand gently but firmly through the introitus, along the vagina to the neck of the womb, the os of which may now be found soft and dilatable. With your fingers examine the presenting part, and if it is a placenta previa you will readily recognize it by its soft, spongy feeling, the situation being either lateral or central, it being partly detached. Nor do you stop here, but pass the hand through the placenta if central, or by the margin if lateral, the hand now acting as a hemostatic plug. Podalic version is now performed. I believe that bringing down one foot is the better practice, because the conformation of the leg and thigh is better adapted to the shape of the os, which contracts around it as the hand is removed, thus insuring a more complete guard against the flow of blood. By this time the influence of the ergot is being felt by the uterus, which strongly contracts, increasing the pressure at the mouth of the womb, being aided by traction on the leg. If the child is living this traction should be gentle to avoid injury, but if dead, which may have been ascertained by feeling the cord during version, and by the absence of other signs of life, the traction should be more forcible in order to keep closed, if possible, the bleeding vessels.

During delivery pressure should be made over the womb externally, to stimulate uterine contractions and to assist this effort of

nature. Contractions may also be stimulated by backward pressure of the vagina and downward and forward pressure of the perineum. Should this procedure fail to deliver because of the weakened condition of the mother, then instrumental delivery is the only alternative. Heart tonics and stimulants must now be applied as the case demands, and if the loss of blood has been great and the anemia is extreme, two or three quarts of normal salt solution should be passed into the colon by the rectal tube, and this repeated a few times as it becomes absorbed or is partly lost by the propulsive force of the bowel. Efforts should not cease until reaction has thoroughly taken place.

On July 24, 1904, I was called to attend Mrs. K. in her seventh confinement at full time. I found her suffering the most excruciating pain in her left breast, the pain resembling angina pectoris. She was unable to sit or lie down, constantly walking the floor and groaning from suffering. It was only after several doses of morphine that she was enabled to assume the recumbent position for an examination. I found unmistakable evidences of beginning labor, but the pains were very feeble; in fact, wholly ineffectual. There had not been any advance in the presenting part, but the head was low in the superior strait, and the os was dilated to about the size of a silver dollar, and soft. I attributed the powerless condition partly to the effect of the morphine, but as there was no indication for hastening labor, and the woman was tired out from her suffering before my arrival, I awaited nature's efforts and the patient's recuperation. After resting quietly for about one hour she began to show signs of resuming labor, but the efforts were still feeble. And while the pain in the breast was much better, it was still annoying and seemed to be synchronous with the efforts of the womb. Still there was no cause for anxiety, as the child was strong and the pelvis roomy; and under the influence of viburnum compound and cimicifuga, her condition was apparently improving. While feeling thus secure in the situation, I noticed a twitching of the facial muscles, the eyes showed muscular spasm, the head sank back in the pillow and there was ushered in one of the worst puerperal spasms I ever witnessed. Now the scene was changed. All was bustle and anxiety. It was midnight and all the family was aroused, running to and fro, seeming to realize the impending danger. Morphine, chloroform and Norwood's tincture of veratrum were the three remedies that suggested themselves as I hastily recalled the indications for treatment. Thirty grains of chloral hydrate by rectum was also administered. But while the severity of the convulsions was modified by the treatment, they continued more or less severe for twenty-four hours before they yielded permanently. But to return

to the labor. When I found the convulsions continuing, which I expected they would until after delivery, I suggested to the husband that to shorten his wife's suffering a forceps operation would be necessary. He most strenuously objected, seeming to have a superstitious awe to operative proceedings. I called for counsel and Dr. H. hastened to respond. Meanwhile I was kept busy with the medical treatment and mechanical encouragement of the womb by dilating the neck and external manipulation. After Dr. H. arrived, while we were preparing to close labor by forceps delivery, the husband having yielded to our counsel, a very severe convulsion ensued which seemed to spend its force in the pelvic region, and spontaneous delivery took place. The convulsions did not end with the finishing of labor but continued with more or less severity for several hours. The child died from asphyxia while still unborn, but the mother made an uneventful recovery. I will say, before leaving this case, that the urine contained a large amount of albumen, forcing the conclusion that non-elimination by the kidneys of the poisonous wastes of the body, was the cause of the convulsions.

A large proportion of these cases prove fatal, notwithstanding the boasted advance in therapeutic science. I sometimes think we have departed too far from the old practice of venesection in this disease. Can we not eliminate by bleeding and compensate by refilling the blood vessels with the normal salt solution? I believe if uremia is the cause of these convulsive attacks its force may be weakened by the above process, giving nature a chance to repair the damage to the kidneys which has resulted from pressure upon their vessels, or possibly upon the organs themselves. Of course, if the lesion is beyond recovery, the patient must succumb to the inevitable. It has been my experience that there is a strong tendency to recovery where by the delivery of the child the cause of the kidney affection is removed. But while the kidney itself may recover its function, the blood may be so saturated with the poisons of defective elimination that death will take place before they are carried away through the natural channels. The treatment, then, is to stimulate and tone the eliminative processes, guarding the heart with the indicated remedies.

Only last week I was called in counsel by Dr. B. of my own town and found a primipara delivered four hours previously of a healthy child. I learned from the doctor that labor had been perfectly natural, and comparatively short for the first birth. He had left the mother feeling unusually well. This woman was having convulsive seizures, averaging one every half hour. I found the function of the kidneys nearly suppressed, and the urine which was drawn by catheter,

about 75 per cent albumen. She was complaining of violent headache, with partial loss of sight, which became complete as the disease progressed. There was a history of much headache for some time previous to confinement. The treatment consisted of chloroform, morphia and tincture of veratrum to control the convulsions, which it did in about nine hours. This was followed by heart tonics and stimulants, as the heart showed signs of weakness. The bowels were flushed with high warm water enemas, followed by normal salt solution well up into the colon. This was given, not to replace a loss, because there had been none, but to stimulate the action of the kidneys. After the first convulsion nothing could be given by the mouth until the attacks had ceased, and then water was taken freely. Urine was drawn once in six hours, and soon showed signs of improvement by a larger secretion and a smaller per cent. of albumen. The mind became more clear, as was evidenced by her answering questions intelligently. We were becoming quite hopeful, when, to our surprise, hypostatic congestion and edema of the lungs set in, beginning at the base and gradually extending until the whole lung tissue was involved. Of course death resulted. She lived about forty-eight hours after the first convulsion, during nine of which she was in the convulsive stage, twenty-four in the comatose stage, the remainder being the progress of the lung disease. I am satisfied this patient would have recovered had there been no pulmonary involvement.

Adherent placenta is a condition capable of producing great danger to the mother and no little anxiety on the part of the attending physician. The natural efforts of expulsion are powerless to overcome the abnormal adhesions existing between the placenta and womb, which is prevented from contracting on the open bloodvessels—nature's way of controlling hemorrhage—and often alarming bleeding results. Promptness only in applying the indicated treatment can save the woman's life and the doctor's professional reputation.

On July 2, 1904, I attended Mrs. S. in a second confinement. Labor was natural until she reached the third stage, when trouble began. Sitting by the bedside with my hand over the uterus, as is my custom in all cases in order to watch the behavior of the natural forces and to stimulate uterine contractions, I discovered an unusual delay in the completion of the third stage. Becoming anxious because of this delay, and fearing some accident might happen, I attempted by the Credé method and gentle traction on the cord to complete the delivery. There had been good natural contractions. After the above method failed I concluded that adhesions existed, and this I found to be the fact. Fearing a possible hemorrhage and believing

it inadvisable to wait longer, I disinfected my hand and arm, and passed the hand to the fundus of the womb, and, as I expected, found complete adhesions between the placenta and the uterine wall. These adhesions consisted apparently of strong fibrous bands which were very hard to separate from the placental site. It was a long and tedious operation, and caused the woman much suffering. I did not use chloroform, because I believed it would predispose to flooding, and that was the one important thing I was trying to prevent. The afterbirth was successfully removed, after which the womb contracted nicely. I followed the extraction of the placenta by a hot antiseptic uterine douche, which I repeated once a day for two or three days, and then continued only the vaginal washings. About the third day the temperature rose to 102°, preceded by light chills, sweating and the like. A few large doses of quinine produced a change for the better, and the patient gradually passed into the stage of convalescence and made a good recovery.

Pus Tubes in the Male.—According to W. T. BELFIELD, Chicago, (*Journal A. M. A.*, April 22), due attention is not often enough given to the fact that the genital duct proper in the male—including the seminal vesicle, the vas deferens and the epididymis—is as liable to suppuration as the urethra. The pus infections of these parts present a close but neglected analogy with the familiar infections of the fallopian tubes, and he draws from this the practical conclusion that the rational treatment should often be surgical. The acute hydrocele and serotal edema often accompanying epididymitis are, he says, infallible signs of suppuration, and incision is followed by relief of pain and swelling, even if no pus escapes. The pus may in some cases burrow from the vas into the urethra, and thus produce the familiar phenomenon of relief of the epididymitis with increased urethral discharge. A gleet may also be kept up by epididymal suppuration and incision be required for its cure. Chronic suppuration with pain may also require surgical treatment, and destruction of the testis by extension of the disease be also thus averted. In acute or chronic pus infection, the lower end or tail of the epididymis presents the chief swelling, and here the incision should usually be made. Simple puncture may sometimes suffice, but a half inch or more incision with stitching the edges of the pus cavity to the skin and drainage is usually the better way. In a few cases Belfield adopted a novel method, namely, injections into the vas deferens and seminal vesicle through a needle introduced into the vas just above the epididymis. The therapeutic value of such injections is not yet fully decided, but Belfield considers it a practicable method, and so far, the only one by which we can directly medicate the male genital tube.

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EDITORIAL COMMENT.

THE FIFTY-NINTH ANNUAL MEETING.

We look forward with much pleasure to the coming annual meeting of the State Medical Society. There are many reasons for our interest in this meeting. Reorganization by means of county society representation has, we believe, gone beyond the experimental stage. At the last annual meeting the success of the new plan seemed assured. We now have behind us the first year's work of a county system that is complete, and while some counties have been more active than others, geographical distribution is, very naturally, a determining factor in many cases.

The expeditiousness with which the business part of the meeting progressed last year will doubtless be repeated, and this will permit little interference with scientific sections.

The Program Committee announces a series of papers that are well distributed over the entire field of medicine, and the selection of Drs. V. C. Vaughan and Hugh H. Young for the addresses in Medicine and Surgery, respectively, commends itself to all.

The social side of the meeting has been well taken in hand by our La Crosse brethren, and the plans that are being made for the entertainment of the members and those who accompany them are of such an elaborate nature that this feature will be not the least enjoyable part of the meeting.

The preliminary program, the announcement of the Entertainment Committee, and the secretary's letter, all appearing elsewhere in this issue, present the details of our coming meeting so attractively that it is useless to make further comment here.

So come now, all who possibly can, and help to make this, the 59th annual gathering, a bigger success than any previous meeting.

THE MEDICAL BILL.

Substitute Bill 353 A, the so-called "Medical Bill," published in full in our last issue, has met with the most strenuous opposition in the Legislature. The entire press of the state, the Wisconsin Press Association and the Daily Press Association, have had numerous attorneys and other representatives at Madison to fight the measure. Thus far there have been six hearings on the measure before the several committees of the Senate and Assembly.

The newspapers and the quacks, whose interests are in common in this matter, joined hands, as they have always done, and the contest between them and the various committees representing the State medical societies, State Board of Medical Examiners, and the physicians generally, has been spirited, not to say fierce, at times. The same old arguments about "doctors' trusts," "jealousy of the more enterprising advertising doctors," "unheard of powers of the State Board," etc., have been made use of by our opponents. Notwithstanding that the quacks are fighting for their professional existence and the daily newspapers for a large portion of their income, the bill, slightly modified from the original form, has passed the Assembly and has gone to the Senate, where no doubt the fight will be continued with increased spirit. Thus far we have done well, but now is the crucial moment! Now is the time to communicate with your Senator and urge the final passage of the bill. When this has been accomplished, as it will be, if

we stand together, every physician in the state who has contributed even the smallest effort in this behalf will have reason to be proud of the fact that he assisted in the fight to exclude from the newspapers the disgusting, filthy and altogether harmful advertisements of these unspeakable rascals who masquerade as physicians, and to break up this unholy and dishonest alliance between the above mentioned scoundrels and the selfish element of the press. With this alliance broken up or the effect minimized, the modern charlatan will have a weary existence in this state, for without the publication of newspaper advertisements it will be difficult for him to replenish his list of victims "every little while" as he does at present by moving to the next town and indulging in a spurt of advertising.

IF YOU HAVE NOT ALREADY DONE SO, WIRE, WRITE OR TELEPHONE YOUR SENATOR TODAY, TO VOTE FOR THE BILL ON ITS FINAL PASSAGE.

THE ABORTION BILL A LAW.

An important step in the purification campaign that has been going on in Wisconsin, was taken when the Governor signed the bill, passed by the Legislature, relating to immunity from prosecution to be enjoyed by the person giving evidence in a case of abortion. The professional abortionist has been plying his trade with a sense of security that was as real as fancied, because hitherto all parties concerned in such a transaction have been equally culpable under the law.

We are now fortunate in possessing a law that compels—while granting immunity from prosecution—the victim to testify as to the facts in any given case of this criminal character.

The following is a complete and correct copy of Chapter 149, laws of 1905, relating to abortion cases:

"No. 155 A. (Published May 4, 1905).

CHAPTER 149.

AN ACT, to compel persons to testify in prosecutions brought under sections 4352 and 4583 of the statutes of 1898; and to grant immunity to such persons so compelled to testify.

The people of the State of Wisconsin represented in Senate and Assembly, do enact as follows:

SECTION 1. No person shall be excused or privileged from testifying fully under oath in any prosecution brought under the provisions of sections 4352 and 4583 of the statutes of 1898 or for any of the causes mentioned in either of said sections when so ordered to testify by a court of record or any judge thereof; but no person shall be prosecuted or subjected to any penalty or forfeiture for or on

account of any transaction, matter or thing concerning which such person may so testify or produce evidence, except for perjury committed in giving such testimony.

SEC. 2. This act shall take effect and be in force from and after its passage and publication.

Approved May 3, 1905."

"IS CHICAGO MEAT CLEAN?"

The relatively numerous cases of trichinosis that have recently been discovered in Milwaukee bring into prominence the danger that lurks in the use of inefficiently inspected and insufficiently cooked hog's meat.

The London *Lancet* has shown its interest in the American meat problem by investigating the Chicago stock yards, and has published a series of articles on this subject by a "Special Sanitary Commissioner." In these articles the sanitation of the stock yards is roundly condemned, the filth there existing described in no dubious manner, and the lack of facilities for common cleanliness on the part of the employees emphasized.

Under the caption "Is Chicago Meat Clean?" *Collier's Weekly* (April 22, 1905) publishes views from three different sources: a brief statement by Mr. Upton Sinclair, very harsh in its criticism of the unsanitary methods employed and the laxity of government inspection; a number of excerpts from the *Lancet's* articles; and a report, the result of a personal inspection in the interest of *Collier's*, by the eminent sanitarian, Major L. L. Seaman, M. D. Major Seaman's report is largely a refutation of the charges made by the London *Lancet*, and while recognizing his unquestioned ability, we must express our great surprise at, and certainly our unconcealed and unqualified disapproval, of his deductions in refutation of the *Lancet's* charges. Dr. Seaman says:

"The special inspection of hogs for trichinæ is required solely because the four European countries which have been mentioned (Germany, Austria, France, Denmark) will not permit importations of pork from this country unless there is a government certificate with each importation to the effect that the meat is free from this form of disease. One reason why the Governments of those countries are particular as to trichinæ is due to the fact that large quantities of raw meat are eaten by their peoples. The people of the United States and Great Britain, on the other hand, rarely eat raw meat. A boiling temperature will kill trichinæ, and therefore it has been held that inasmuch as English-speaking peoples almost never eat raw pork, the presence of these parasites in the meat that is consumed by this country

and Great Britain is not a serious menace to health. And to some extent this would seem to be borne out by the fact that cases of trichinosis are very rare, especially in the United States. There has been only one recorded death from trichinosis in Chicago, where large quantities of pork are consumed by the foreign element especially, in the last seven years."

Are arguments such as these really the honest conviction of one who is supposed to have made an impartial investigation in an important controversy?

Dr. Seaman admits that "large quantities of pork are consumed by the foreign element" in Chicago (we may infer from what has gone before that he means raw pork). This is in flat contradiction to his statement that the people of the United States rarely eat raw meat, and yet he follows his curious reasoning with the conclusion that "inasmuch as English speaking peoples almost never eat raw pork, the presence of these parasites in the meat that is consumed by this country is not a serious menace to health." As a matter of fact, more pork is consumed by these immigrants than any other meat, and it is reasonable to infer that the habit contracted in their native land of eating their meat raw or only partially cooked or smoked (sausage), will cling to them in their adopted country, too.

Then, too, we most emphatically deny the rarity of trichinosis. Its *relative* rarity has been due to a lack of clinical methods for its detection, but now that certain blood findings, in the presence of suspicious symptoms, give us almost positive evidence of its existence, the disease is being more commonly recognized. If Major Seaman has kept himself informed of the advance made in the past few years in the recognition of trichinosis by this means, and of the 40 or more cases various observers have reported in corroboration of this blood test, where remain his arguments as to the rarity of the disease? Furthermore, if our statistics show but few recorded cases, how many unrecorded recognized and unrecognized cases may there be? As soon as physicians will have become sufficiently impressed with the need of bearing this infection in mind when confronted with cases of possible typhoid fever, muscular rheumatism, or grippe, an array of statistics will be amassed that will prove astonishing.

Again, we are asked to accept as an argument the fact that but one death from trichinosis has been recorded in Chicago in the past seven years. Does Major Seaman present this in all seriousness? If but one recorded death, how many unrecorded deaths? And, as it is a fact that but a fraction of the product of Chicago's stock yards is consumed in that city, how many deaths elsewhere in this and other

countries that demand no inspection? However, disregarding possible deaths, why evade the question and attempt to mislead by confounding morbidity with mortality? Does not one death mean ten or many times ten cases of the infection? The same fallacious reasoning would justify the argument that because one death from diphtheria may have followed in a series of ten or twenty cases, it were hardly worth while to institute a quarantine against the disease. The rate of mortality cannot be an estimate of the incidence of morbidity. We know it to be a fact that evidences of trichinosis are found in Chicago rather more frequently than expected when carefully searched for at autopsies. One report of the Bureau of Animal Industry estimates that 2.7 per cent. of all hogs are trichinous. Even higher percentages have been recorded. In Milwaukee, eight (8) hogs out of one carload have been found infected.

Dr. Seaman's further statement that "certain hogs are set apart for the trichinæ examination, in order to fill the orders from the four foreign countries which require special examination for trichinosis," justifies the deduction that not all hogs are examined for the presence of this disease, and as there is no law preventing the sale of uninspected hogs, is he not therefore wrong in his "conclusion" that "there is no tainted meat sold from the Chicago stock yards?"

Let us grant it as a possibility that the charges made by Mr. Sinclair, and by the London *Lancet* may be exaggerated; can this—in the face of his own admissions—justify Major Seaman in his efforts to "whitewash" the stock yards of the unsavoriness of the reputation they seem to have earned? Indeed, we are tempted to ask, was this investigation made in the interest of *Collier's*, or of the packers?

It is a misguided paternalism savoring of class legislation which, in order to create a foreign market for our products, compels the inspection of meat for the protection of foreign consumers, and has no care of the health of native consumers.

Not until the meat for home consumption is treated with the same degree of concern as is that for export, and not until the government, state or national, acts more vigorously in the matter of the sanitation of stock yards, will we feel ourselves absolutely or reasonably secure.

Illogical and biased reports, such as is the one we here criticise, even though recommendations for the correction of existing abuses are made, do an enormous amount of mischief, because by removing the sting of certain severe charges, they delay the awakening of the conscience of the law-makers and of the packers themselves.

THE STATE BOARD REMAINS FIRM.

The very recent action of the Wisconsin State Board of Medical Examiners, *in re* the Harvey Medical College, made only after a searching and rigid investigation in response to an order from the Circuit Court of Milwaukee, must meet with the approval of all fair minded and honest thinking physicians.

Some ill feeling had been engendered by the Board's previous ruling in this matter. At our request Dr. Forsbeck, the Secretary, has prepared a statement (see page 709) outlining briefly the case in question, and giving reasons for what may to some have seemed an arbitrary and unjust ruling.

We congratulate the Board upon the stand it has taken in this matter. Consistency is a jewel only if it is actuated by no ulterior motives, and the excellent showing made in this investigation stamps this Board as a committee of gentlemen who feel the responsibility of their position and live up to their convictions.

The Board has been charged with arbitrariness in its decisions. There is truth in this charge, but the law grants these gentlemen discretionary powers and they are thus constituted the tribunal before which these matters are adjudicated. And being composed of practicing physicians of various schools, broad and liberal minded men, their judgment and justice may well be relied upon, and their arbitrariness asserts itself only in their acting in accordance with fair dealing and honest conviction.

We have on a previous occasion voiced an opinion upon the question of the night medical school, and cannot but feel that, as we then expressed ourselves "one who labors with mind and body during the day hours to earn a competency, can hardly possess sufficient energy and nerve force to qualify him for the many exactions of a course of medical study that must be indulged in after sundown."

ASSOCIATION OF AMERICAN ANATOMISTS.

A conference heralded as indicating a new era in American anatomy, was recently held at the Wistar Institute of Anatomy in Philadelphia. There were present ten of the leading anatomists of this country. The work that has been outlined by these eminent men is especially that of research in various anatomical branches, neurology, embryology and comparative anatomy. Furthermore, there will doubtless result through the medium of the Wistar Institute an interchange of anatomical preparations so that all may profit by the valuable exhibits.

ITEMS OF INTEREST.

Medical College Commencements.—The Milwaukee Medical College graduated a class of 37 in the medical course, May 15. At the commencement exercises held at the Alhambra Theatre, the Dean, Dr. W. H. Neilson, presented the class, and the President, Dr. W. H. Earles, conferred the degrees. Dr. F. L. Kelley of Mauston was valedictorian. The exercises were followed by a banquet at the Plankinton House, participated in by the class, the alumni, and faculty.

The Wisconsin College of Physicians and Surgeons held their commencement exercises at the Pabst Theatre, May 9th, when a class of 19 in the medical course was graduated. Rev. H. H. Jacobs delivered the annual address and the degrees were conferred upon the graduates by the President. Dr. A. H. Levings. Dr. H. B. Werner delivered the valedictory. At a largely attended banquet held at the Republican House, Dr. Otho Fiedler presided as toastmaster.

Victor H. Bassett, A. B. (Knox College, 1896), M. D. (Johns Hopkins University, 1903), has been added to the faculty of the Wisconsin College of Physicians and Surgeons as Professor of Pathology and Director of the Marks Laboratories of Pathology and Bacteriology. Dr. Bassett will also be associated with Dr. Otho A. Fiedler in the Germania Clinical Laboratory in the departments of pathology and bacteriology.

Dr. Bassett's qualifications for this work are most excellent. He has done postgraduate work at the Universities of Wisconsin and Michigan; was associated with Prof. Zeit as an expert in the bacteriology of the Chicago Drainage Canal, and in the summer of 1902 demonstrated the Shiga bacillus to be the cause of cholera infantum; he was instructor in bacteriology and clinical pathology at the Northwestern University Medical School, and fellow in pathology in the Johns Hopkins University Medical School, 1904-1905.

A Halt to Substitution.—Fairchild Bros. & Foster deserve much credit for having inaugurated a plan for the correction of an existing evil that we hope to see taken up by other manufacturing pharmacists. Suspecting that certain druggists were substituting other preparations for those called for by prescription, this firm made an investigation in the case of a druggist in St. Louis and found their suspicions corroborated. They therefore sent a circular letter to all physicians in the city telling them the facts, mentioning the guilty druggist's name.

Powerless oftentimes to prevent the practice of substitution on the part of some druggists, physicians will surely welcome any effort that is made to enable them to choose between the pharmacist who carries out their bidding and the one who is content to use the "just-as-good" article.

Compulsory Notification of Tuberculosis.—The bill requiring notification of all cases of tuberculosis has been passed by the Legislature, and signed

by the Governor, thus becoming a law. The bill also provides that any dwelling in which a death from tuberculosis occurs shall be cleaned and thoroughly disinfected by the owner of the premises under the direction of the Health Department.

The passage of this bill shows the gradual awakening of the community to a recognition of the contagiousness of tuberculosis, and will prove a long step in advance towards the stamping out of the disease. The benefits of this law will be particularly felt in lodging and tenement houses where exposure to contagion is greatest.

Medical Legislation in Illinois.—Success has marked the efforts of physicians to combat certain vicious measures that had been presented to the Legislature in Illinois. Six osteopathic, two optometric, and one anti-vivisection bill failed of passage. The boldness of the osteopathic demands is interesting. Among others there were bills providing that osteopaths may have the right to practice surgery and to use antiseptics, anesthetics, and antidotes for pain; that there be created a State Board of Osteopathic Examiners to examine and license graduates of osteopathic colleges; that those now licensed to treat diseases without medicine or surgery be licensed to practice surgery and osteopathy without examination if recommended by the Illinois Osteopathic Association.

H. H. Parrott, M. D., a pioneer physician of Marquette County, died at Endeaver, April 17, aged 86 years. Dr. Parrott received his early education at Christ Church College, and studied medicine at Guys and St. Thomas Hospital, graduating at the age of 25. He was a member of the Royal College of Surgeons, London, and a Licentiate of Apothecaries Hall. In 1850, after six years of practice near London, Dr. Parrott came to Wisconsin, and for fifty years practiced medicine in Marquette County.

Board of Trustees for Milwaukee County Hospital.—The Governor has signed the bill passed by the Legislature placing the Milwaukee County Hospital under the direction of a Board of Trustees, to be elected by the Board of Supervisors. The bill was introduced at the instigation of the Medical Society of Milwaukee County and represents what organized effort can accomplish.

The Kinney bill to establish a State Sanitorium for Tuberculosis is meeting with some opposition in the Legislature on the ground of expense involved. This is one of the most important bills before the present session. It is to be hoped that the bill will be passed. Physicians generally throughout the state should interest themselves and urge their representatives to support it.

Dr. F. A. Wallace, a pioneer physician at Fox Lake, Wis., died April 26, 1905, aged 87. Dr. Wallace was a graduate of the Pennsylvania Medical College in 1841.

CORRESPONDENCE.

THE HARVEY MEDICAL COLLEGE OF CHICAGO.

EDITOR WISCONSIN MEDICAL JOURNAL:

As there seem to be various opinions among the members of the medical profession relative to the justification of the Wisconsin Board of Medical Examiners in their action in the case of A. Budan versus this board, it would not be amiss to give a synopsis, stating the facts as they have been presented from time to time.

Dr. Arthur Budan graduated from the Harvey Medical College, a night school of Chicago, on June 28, 1902, and presented at the July meeting, 1903, an application for a reciprocal license, based upon license obtained by examination in the state of Illinois. As this board held this college of doubtful standing, it was determined to hold the application over until the October meeting of the same year. The committee appointed to investigate the college having been unable to satisfy itself as to the reputability of this school, was given an extension of time until January, and Dr. Budan was informed that he could either take the examination at this meeting, that is October, 1903, or be governed by the investigating committee's report in January. The doctor chose the latter alternative, and at the January meeting of 1904, the committee reported as follows:

"Having investigated the Harvey Medical College of Chicago, we, your committee, appointed for such purpose, finding that said school is not conducted according to the standard of requirements of this board, respectfully recommend that the Wisconsin Board of Medical Examiners does not in the future recognize the diplomas of said school in any way."

On this ground, the application for reciprocal license of Dr. Budan was refused, and he was likewise refused admission to the examination. This resulted in Dr. Budan's instituting mandamus proceedings against the board, compelling the board to show reason why a license should not be issued to him. The case was argued somewhat at length in Judge Williams' Court, and the findings of the court were that this board should either grant Dr .Budan a license on the basis of reciprocal relations existing between the state boards of Wisconsin and Illinois, or admit him to examination on his Harvey Medical College diploma, or re-investigate the Harvey Medical College, and determine more accurately its standing as far as the require-

ments of the medical laws of Wisconsin were concerned. The members of this Board were convinced that the last alternative was the only correct course to pursue, and to that end, a committee of four was appointed, which, together with the attorney of the board, visited the Harvey Medical College in January, 1905, and reported in general as follows:

"Our general conclusion, based upon the examinations we have made, is that the college is not a first-class medical college, is not a reputable college under the standard established by the statutes of Wisconsin and the rules of this board.

"It is a night school; in fact, it advertises itself, in large letters, as the 'oldest night school medical college,' and your committee is satisfied that a night school—practically and exclusively a night school—cannot furnish the training and education to a well-equipped modern physician.

"Our examination of the students of this college, and also, the admissions of the officers thereof, shows that practically the whole student body is composed of men and women who labor during the day to make a living and who attend this school from seven to ten o'clock in the evening, for the sake of obtaining some medical education, and if given a diploma to practice medicine, no doubt, in some instances, expect to practice medicine and surgery.

"We are satisfied that a thorough training and education in medicine and surgery requires the full time and attention of the student, and that divided attention between making a livelihood and acquiring such education will not train a man or woman who attempts to do this, sufficiently and adequately, to become safe practitioners of medicine.

"The fact is, as appears from statements made in the catalogue of this college, and also, from a letter by the president of this college to the president of this board, that the main object and purpose of this college is to give preliminary instruction in medicine and surgery to persons who will finish their education in other and better equipped colleges.

"We are satisfied that this college, at best, can and does furnish fairly adequate instruction and facilities to prepare students for admission to some other first-class medical college, and offers facilities to complete the first and second years' work of the regular curriculum of a medical college; but we are also satisfied that the granting of a diploma to persons who have completed four years in this college, is not a sufficient certificate of competent, adequate and satisfactory equipment for the practice of medicine and surgery.

"Our conclusion, therefore, is that the Harvey Medical College is not a reputable college, according to the standard adopted by the laws of Wisconsin and the rules of this board, and we therefore recommend the following resolution by the board:

" 'Resolved, That the resolution passed by this board on the 12th day of January, 1904, to the effect that the Harvey Medical College, of Chicago, is not conducted according to the standards of the requirements of this board, and therefore, its diplomas would not in the

future be recognized by said board, be reaffirmed, and that said Harvey Medical College be declared not a reputable medical college, and the diplomas thereof be not recognized by this board.' "

In view of this report, the board unanimously passed the following resolution:

"Resolved, That the board reaffirm its determination heretofore made to the effect that the Harvey Medical College of Chicago is not a reputable medical college under the provisions of the law of Wisconsin and the rules of this board, and that this board refuses to recognize diplomas from the Harvey Medical College as proper credentials of graduation from a reputable medical college."

Any further comments on this case are unnecessary, and I am confident that the medical profession of Wisconsin will endorse the stand taken by this board in this matter, and as the only honorable and justifiable course to pursue in similar cases in the future. In no other way can justice be done to medical colleges which are, in fact, complying with medical laws. Were it otherwise, graduates of reputable medical institutions who are spending their time and energy in obtaining a medical education worthy of its name, would be put on a par with graduates from such institutions as the Harvey Medical College, which simply offers a short road to the obtaining of a degree, but with the conspicuous lack of proficiency in matters medical.

FILIP A. FORSBECK, M. D.,
Secretary Wisconsin Board of Medical Examiners.

Dangers from Indiscriminate Use of Cathartics in Acute Intestinal Conditions.— M. L. HARRIS, Chicago (*Journal A. M. A.*, February 25, 1905), states that physicians often fall into the error of prescribing cathartics in every case in which there is interference with normal bowel action without considering the cause of the condition. He calls attention to the danger of giving cathartics in cases in which there is mechanical closure of the lumen of the bowel, such as occurs in strangulated hernia, or in strangulation by reason of a loop of bowel becoming caught in an omental or mesenteric opening. He states that if cathartics are given in these conditions the contents of the intestine above the obstruction are turned back and forth, and not being able to pass the obstruction, are forced back into the stomach, thus giving rise to the foul, offensive vomiting so characteristic of the condition. In intussusception the chief effect of cathartics is to augment the congestion and swelling and thereby lead earlier to complete obstruction and sloughing. Dr. Harris reports a case of sigmoiditis in which a cathartic produced bloody stools. He operated, thinking that there might possibly be an intussusception, but found only a sigmoiditis. Dr. Harris protests against the indiscriminate administration of cathartics in acute conditions in the abdomen, and emphasizes the importance of physiologic rest of the intestine. He advises early operation in all cases of mechanical obstruction.

THE STATE MEDICAL SOCIETY OF WISCONSIN.

ORGANIZED 1841.

Officers for 1904-1905.

C. W. OVIATT, Oshkosh, President.

I. A. L. BRADFIELD, La Crosse, 1st Vice-President.

GILBERT E. SEAMAN, Milwaukee, 2nd Vice-President.

A. B. ROSENBERRY, Arbor Vitae, 3rd Vice-President.

CHAS. S. SHELDON, Madison, Secretary.

S. S. HALL, Ripon, Treasurer.

A. T. HOLBROOK, Milwaukee, Assistant Secretary.

Councilors.

FOR ONE YEAR.

1st Dist. H. B. Sears, - - Beaver Dam
2nd Dist., J. G. Meachem, - - Racine

FOR TWO YEARS.

3rd Dist., F. T. Nye, - - - Beloit
4th Dist., C. A. Armstrong, - - Boscobel

FOR THREE YEARS.

5th Dist., J. F. Pritchard, - - Manitowoc
6th Dist., J. S. Walbridge, - - Berlin

FOR FOUR YEARS.

7th Dist., W. T. Sarles, - - - Sparta
8th Dist., T. J. Redelings. - - Marinette

FOR FIVE YEARS.

9th Dist., D. L. Sauerhering, - Wausau
10th Dist., E. L. Boothby, - - Hammond

FOR SIX YEARS.

11th Dist., J. M. Dodd, - - Ashland
12th Dist., A. T. Holbrook, - - Milwaukee

Next Annual Session, La Crosse, June 8, 9 and 10, 1905.

The Wisconsin Medical Journal, Official Organ.

COUNTY SOCIETY DUES ARE NOW PAYABLE.

DO NOT FORFEIT YOUR STATE SOCIETY MEMBERSHIP.

SOCIETY PROCEEDINGS.

FIELD NOTES.

Fifty of the sixty-one county societies have sent in returns to date. The net loss thus far is 104. Only those who have paid the 1905 dues are placed on the roll, and the comparison is made with the whole number enrolled in each county society during the whole of last year. This includes a loss of 36 in Milwaukee County. There have been losses in 29 counties, and gains in 18, three remaining the same. All the county secretaries have promised to follow up the delinquents, and to do their best to send in as many names as possible before the Annual Meeting. The prospects now are that we shall close the year with the county organizations practically intact and with our membership about the same as last year. There have been added to the rolls 109 new members, while of last year's membership 220 have not yet paid their dues. The State Secretary has sent the following communication to the latter:

"Dear Doctor:—I notice with extreme regret that you have not, as yet, paid your dues for 1905 to the secretary of your County Society, and that, in consequence, your name is not enrolled as a member of the State Society. Very likely this is by reason of an oversight or carelessness on your part, and, if such is the case, I sincerely hope you will send in your dues at once, and thus become reinstated in membership. I thoroughly believe that, in so doing, you will not only aid in this great work of Medical Organization, but that your own personal interests demand such action as well. It seems to me that you cannot *afford* to refuse to be a part of this great movement and to remain outside *all* medical organizations. You *need* your County Medical Society, and the Society needs *you*. We shall not rest satisfied till *every* good man is in our ranks, and in to stay. When this is brought about and we have a *united* profession there will be no limit to the things we shall be able to accomplish. This year is a critical period in the history of our state organization, and we feel perfectly justified in calling on every qualified medical man to help carry on the good work so splendidly begun last year. Will you not kindly do your part?"

The attention of the Society is called to the bills now before the State Legislature affecting the medical profession. Some of these bills are of the greatest importance, and if "medical organization" is to make itself felt in a practical way, and if we are to demonstrate the utility and necessity of this movement, *now* is the time to act. The bill "Substitute for 353A," enlarging the powers of the State Board of Medical Examiners, strikes at the root of some of the most disgusting phases of medical quackery, and is designed to purge the profession of those abortionists and venereal specialists who are flooding the newspapers with filthy advertisements, which are a disgrace not only to journalism but to American civilization. It should have the vigorous and immediate support of every member of the medical profession, and we shall sadly fail in our duty if we do not make our influence felt in the Legislature. The following circular has been sent to all the members of the County Societies:

"Dear Doctor:—It is of the utmost importance that you write or wire at once both your Senator and Assemblyman, to work and vote for the passage of Bill "Substitute for 353 A," printed on page 669 of the April number of the WISCONSIN MEDICAL JOURNAL. The bill is being bitterly opposed by the mercenary and selfish element among the newspaper men, and we must all rally to its support." (Signed by the President and Secretary State Medical Society).

It is hoped that a flood of telegrams and letters from the members will make clear to the Legislature that here is a power which may have to be reckoned with *politically*.

This is the "last call" in the JOURNAL anent our State Meeting at La Crosse, June 8, 9 and 10 (Please remember the *change of date* from the 7th to the 8th). Chairman Evans, of the Committee on Arrangements, tells us, on another page, of some of the good things we may expect on that occasion.

Your attention is also called to the Scientific Program which is published in this issue. The papers cover a wide range, are evenly distributed among the various departments of medicine and surgery, and have been prepared with great care by the writers. It cannot fail to be attractive and successful. The address of Prof. V. C. Vaughan on "Tuberculosis and Its Prevention," on the evening of the first day, and the Address on Surgery, by Prof. Hugh H. Young, of Johns Hopkins University, will be notable events which no one can afford to miss. At the close of Dr. Vaughan's address, Prof. H. L. Russell, of the University, will give a scientific exhibit on the spread of tuberculosis and the means adopted for its prevention and cure, illustrated by numerous charts.

Come to the meeting on the *first* day and make up your mind to stay till the last paper is read, for it will all be good. Moreover, come with something brief and practical to say about the subjects in which you are interested. The *discussions should be* the very best part of the program.

Do not forget to send specimens for the *Pathologic Exhibit.* They may be sent any time before the meeting to Dr. Edward Evans, La Crosse, and will be properly labeled and cared for. Dr. C. R. Bardeen, of the State University, who will read a paper, is especially desirous of securing specimens which shall make a nucleus of an anatomic museum at the University. The work of the physicians of the State can thus be made of much value in the instruction of hundreds of our young people who are to pursue the premedical course at Madison.

The arrangements for the special excursion of the Wisconsin contingent for the A. M. A. meeting at Portland have been completed, one car being made up at Milwaukee and one at Madison. It promises to be the trip of a lifetime, and all should go who can possibly afford it. A large number have already written that they are going, and all who are so planning should communicate at once with the State Secretary at Madison, who is in charge of the arrangements. A full itinerary will be sent all who wish it. (C. S. S.)

ANNOUNCEMENT OF THE COMMITTEE OF ARRANGEMENTS.

The Committee of Arrangements has so far perfected its plans that it can assure those in attendance at the State Medical Society in La Crosse, June 8, 9 and 10, a good time and a profitable meeting. Dr. Washburn has arranged the scientific program so that it will not interfere with the good things provided for entertainment. The committee desires that as many as possible who are going to attend the State Medical Society will be there for the first day. This will, perhaps, be the best day of the meeting. Besides the President's Address, which is sure to be good, the lecture by Prof. Victor C. Vaughan, of the University of Michigan, on "Tuberculosis and Its Prevention," which is to be of a popular nature and given in a large hall, is sure to be well worth coming to. To this lecture the public will be invited. We are going to do as Dr. M'Cormack suggested—take the public into our confidence. Besides, we wish to push forward the education of the masses on the question of tuberculosis and its prevention. After the lecture, a conversazione will be given at the Hotel Stoddard, from 9 to 11 o'clock. This will be the dress affair of the meeting, and we desire every member who has a wife to bring her to the meeting and be present at this reception. This same evening, Dr. Russell, of the State University, has promised that, if possible, he will give a scientific exhibit on the spread of tuberculosis and the best means for its prevention and cure. This exhibit will be given in a large room in the Hotel Stoddard.

On the evening of the second day an excursion on the Mississippi in a large new excursion steamer is arranged for. Music and entertaining speakers, who will speak on subjects other than medical, will add to the pleasures of the boat ride. This is sure to be a most enjoyable occasion, as all the elite of La Crosse will join the medical fraternity on this excursion and help to make it successful. Ample provision has been made to take care of and entertain the ladies. We are not, however, going to tell them what we are going to do for their entertainment. In this way we will be able to induce very many more of them to come to La Crosse. We can assure them, however, that La Crosse is a beautiful as well as a hospitable city; and during the first half of June it will undoubtedly be a delightful resort.

Regarding hotels and hotel accommodations, the committee makes the following announcement: Stoddard Hotel, $2.50 to $5.00 per day. Can comfortably accommodate 200 of the members. As we expect a large attendance, it would be a good plan for those who are friends and would like to be together to make arrangements beforehand and engage to room together. If this is done the great majority of the

guests will be able to find accommodation at the Stoddard. The Cameron House is another good house; so also is the La Crosse. Comfortable accommodations can also be secured at Hotel Law, Hotel Grand, The Bronson and the American House. La Crosse also has a number of good boarding houses, and anyone writing to Dr. Gunderson, Chairman of the Committee on Hotels, can have rooms secured at any of these boarding houses, before the meeting. A letter addressed to any of the above hotels will receive a prompt and courteous reply. A committee will be in attendance at the trains during the meeting, to look after the guests and prevent any annoying delay or trouble in securing accommodations.

The House of Delegates will meet Wednesday evening, June 7, at 8 o'clock, at Hotel Stoddard.

Pathological exhibits should be sent to Dr. D. S. McArthur, La Crosse, Wis.

The Rush Alumni wish it announced that they will have a reunion meeting Friday noon.

E. Evans,
Chairman of Committee of Arrangements.

PROGRAM OF THE 59TH ANNUAL MEETING OF THE STATE MEDICAL SOCIETY OF WISCONSIN.

Thursday, June 8, 1905.

11 A. M.

Opening Exercises and Reports of Committees.

2 P. M.

Address of the President, Dr. C. W. Oviatt.

1—"Ectopic Pregnancy," W. C. F. Witte, Milwaukee. Discussion opened by C. H. Lemon, Milwaukee; C. C. Gratiot, Shullsburg.

2—"The Permissibility of Medical Abortion," W. E. Fairfield, Green Bay. Discussion opened by T. J. Redelings, Marinette; J. R. Barnett, Neenah.

3—"Squint," Nelson M. Black, Milwaukee. Discussion opened by J. A. L. Bradfield, La Crosse; G. E. Seaman, Milwaukee.

4—"The Clinical Aspects of Diabetes," C. J. Combs, Oshkosh. Discussion opened by F. W. A. Brown, Oshkosh; B. Clark, Oshkosh.

5—"The Present Status of the Surgical Treatment of Undescended Testicle," Chester M. Echols, Appleton. Discussion opened by W. E. Fairfield, Green Bay; A. H. Levings, Milwaukee.

8-9 P. M.

Address on Medicine (Public Invited), Prof. V. C. Vaughan, of Ann Arbor, Michigan.

9-11 P. M.

Conversazione at Hotel Stoddard.

FRIDAY, JUNE 9.

9 A. M.

6—"Placenta Praevia." G. A. Hipke, Milwaukee. Discussion opened by T. L. Harrington, Milwaukee; G. J. Kammheimer, Milwaukee.

7—"Aseptic Obstetrics." J. P. Cox, Spooner. Discussion opened by E. L. Boothby, Hammond; J. M. Dodd, Ashland.

8—"The Newer Pathology." J. M. Beffel, Milwaukee. Discussion opened by O. A. Fiedler, Milwaukee; C. J. Combs, Oshkosh.

9—"Causes and Symptoms of Cardiac Insufficiency." Jas. D. Madison, Milwaukee. Discussion opened by W. H. Washburn, Milwaukee; F. R. Weber, Milwaukee; A. J. Patek, Milwaukee.

10—"Infantile Scurvy, With Special Reference to Diagnosis." A. W. Gray, Milwaukee. Discussion opened by Thos. H. Hay, Milwaukee.

2 P. M.

Address on Surgery, Prof. Hugh H. Young, of Baltimore.

11—"Arterio-Sclerosis." A. L. Potter, West Superior. Discussion opened by G. H. Conklin, West Superior; P. H. McGill, West Superior.

12—"The State Society, the State University and State Medicine." Chas. R. Bardeen, Madison. Discussion opened by E. Evans, La Crosse; A. J. Puls, Milwaukee; Prof. H. L. Russell, Madison; C. A. Harper, Madison; U. O. B. Wingate, Milwaukee.

13—"The Pathology and Non-Surgical Treatment of Injuries of the Stomach." Wilhelm Becker, Milwaukee. Discussion opened by Warren B. Hill, Milwaukee; Louis F. Jermain, Milwaukee.

6-10 P. M.

Steamboat Excursion on the Mississippi River.

SATURDAY, JUNE 10.

8:30 A. M.

14—"The Etiology of Appendicitis." Reginald Jackson, Madison. Discussion opened by E. Evans, La Crosse; C. O. Bechtol, Madison.

15—"The Diagnostic value of Cystoscopic Examinations." W. A. Gordon, Jr., Oshkosh. Discussion opened by P. H. Jobse, Milwaukee; R. G. Sayle, Milwaukee.

16—"Blood Examination as an Aid to Diagnosis." M. Dvorak, La Crosse. Discusion opened by O. A. Fiedler, Milwaukee; J. H. Sure, Milwaukee.

ADJOURNMENT 11:30 A. M.

CLARK COUNTY MEDICAL SOCIETY.

The Clark County Medical Society met at Neillsville, April 5th. The president, Dr. Freeman not being present on account of illness, Dr. Bradbury was elected president *pro tem.*

Dr. George Pomainville, of Humbird, and Dr. J. E. Simpson, of Abbotsford, were elected to membership. Drs. T. F. Conroy and John M. Conroy presented their resignations to the society, which were accepted.

The secretary was instructed to correspond with the secretary of the Wood County Society in regard to joint meetings as proposed by that society.

Dr. P. McKittrick presented a paper on "*Cholera Infantum.*" and Dr. H. H. Christofferson read a paper entitled "*Dyspeptic Diarrhea in Children.*" A general discussion followed.

The next meeting will be held at Loyal unless it is decided to hold joint meetings with adjoining counties.

VIOLA M. FRENCH, M. D., *Secretary.*

CRAWFORD COUNTY MEDICAL SOCIETY.

The Crawford County Medical Society had a meeting at Wauzeka, April 6th. Dr. D. W. Cook, of Gays Mills, made application for membership.

Dr. G. H. Perrin of Wauzeka, exhibited two interesting clinical cases; one a case of compound fracture of tibia and fibula, and a case of gunshot wound necessitating amputation at the shoulder.

Dr. W. T. Pinkerton of Prairie du Chien, read an instructive paper on "Sepsis."

Dr. J. G. Hoffman read a paper on "Cerebro-Spinal Meningitis." The papers were thoroughly discussed in which all participated.

The meetings will continue to be quarterly. The next meeting will be held at Wauzeka.

After the meeting Dr. Perrin invited the members to a banquet.

J. GREGORY HOFFMAN, M. D., *Secretary.*

DANE COUNTY MEDICAL SOCIETY.

The second quarterly meeting of the Dane County Medical Society was held at Madison, March 21, 1905, the president, Dr. C. A. Harper, presiding. Thirty members were present and the following program was presented:

"Syringomyelia." Presentation of case.—Dr. C. O. Bechtol, Madison.

"Methods of Precision Used in the Diagnosis of Digestive Disorders.—Dr. C. P. Farnsworth, Madison.

"Hydrophobia Following Skunk Bite." Report of case.—Dr. L. M. Trulson, Stoughton.

"Complications Arising from Chronic Diseases of the Stomach."—Dr. B. J. Wadey, Belleville.

"Infant Foods."—Dr. W. C. Bennett, Oregon.

"Some Nasal Deformities."—Dr. E. Everett, Madison.

"Remarks on the Third Stage of Labor."—Dr. C. S. Sheldon, Madison.

After the presentation and discussion of the various interesting papers, the Society devoted the time to the earnest consideration of the bills before the Legislature for the elevation of the status of the medical profession of the state. President Harper explained to the Society the importance of the Bill No. 282 S. for the registration of vital statistics and requested the endorsement of the Society for same. This bill, and Bill No. 591 A. giving greater power to the State Board of Medical Examiners were endorsed by unanimous vote, and the President and Secretary were delegated to convey by letter to the Senator and Assemblyman of this district the expression of the Society's views and earnestly requesting their active support. Promises of active support were received from Senator A. M. Stonedall and Assemblyman Ernest Warner.

The following officers were elected for 1905: president, Dr. C. A. Harper, Madison; vice-president, Dr. J. H. Bertrand, De Forest; secretary and treasurer, Dr. R. H. Jackson, Madison; delegate to State Convention, Dr. N. C. Evans, Mt. Horeb.

R. H. JACKSON, M. D., *Secretary.*

DUNN COUNTY MEDICAL SOCIETY.

The Dunn County Medical Society met at the Royal Hotel, Menomonie, April 18th.

Dr. Grannis reported a malpractice suit which he attended recently, emphasizing some of the points which are good lessons to us all.

Dr. Barker presented a case of *tubercular osteomyelitis* in a child of four years.

Dr. Denham read an interesting paper which was generally discussed. Subject: *"Surgery in the Home vs. in the Hospital."*

The matter of systematizing a line of study for our society was next taken up, and upon motion the program committee was instructed to lay out the work for one year upon the subject of surgery, appointing an essayist for each meeting to present the subject to be discussed.

Dr. Barker was elected delegate and Dr. Denham alternate, to the State Society to be held in La Crosse in June.

Supper was served at The Royal, and we adjourned to May 16th, 1905.

B. J. STEVES, M. D., *Secretary.*

LA CROSSE COUNTY MEDICAL SOCIETY.

The regular monthly meeting of the La Crosse County Medical Society was held on May 4th.

Dr. M. Dvorak read a paper on "Blood Examination as an Aid to Diagnosis;" he reported cases in which this method had materially aided in arriving at a correct diagnosis. The paper was well discussed by the members present.

The committee having in charge the arrangements for the coming State Medical Society meeting reported that all was in an excellent way for a good meeting.

C. H. MARQUARDT, M. D., *Secretary.*

LAFAYETTE COUNTY MEDICAL SOCIETY.

The second quarterly meeting of the Lafayette County Medical Society was held at Darlington, April 11th, the president, Dr. C. C. Gratiot, in the chair.

Although only eight members were present the meeting was interesting and profitable. It was deemed wise by those present to publish Dr. Hogue's paper, *The Physician and the Public*, in our county papers in order to help educate the public in regard to patents and quackery, etc. This will be followed by Dr. C. C Gratiot's paper on the *Faults of the Profession and the Public*, which will be published for the benefit of all.

Dr. W. W. Peck, Darlington, was elected president; Dr. O. T. Woolheiser, South Wayne, vice-president; Dr. C. F. Lehnkering, Darlington, secretary and treasurer; Dr. M. C. Barber, censor; and Dr. C. C. Gratiot, delegate for the ensuing year. The excellent paper by Dr. O. T. Woolheiser on "*Some of the Complications of Labor at Term*," caused much discussion. The next meeting will be held July 26th, 1905, at Darlington.

C. F. LEHNKERING, M. D., *Secretary*.

MEDICAL SOCIETY OF MILWAUKEE COUNTY.

Meeting of February 10, 1905.

Twenty-six members were present. President Coon in the chair.

Dr. T. L. Harrington read a paper on the *Use and Abuse of Carbolic Acid*. He advocated a better understanding of the drug and its more general use. He thought three factors to be of importance in causing necrosis, idiosyncrasy, time of contact, and tension of dressings. If it is to be of use at all for first aid dressing by others than physicians, it should not be in stronger solution than 1 per cent., and should be of weaker strength if confined by rubber tissue. He spoke of cases of necrosis caused by 5 per cent. carbolized vaseline. Dr. Würdemann stated that the combination of alcohol with carbolic acid, seemed to prevent the caustic effect of carbolic acid, as in a mixture which he had used for many years in otitis media in which there were two parts of carbolic acid and two and one-half parts of alcohol, in twenty parts of glycerine. The anesthetic and antiphlogistic effects of carbolic acid seemed not to be diminished in this combination. Dr. Wilhelm Becker said that it was interesting to note the effect of carbolic acid on the red blood cells in cases of poisoning. The dilated blood vessels of the stomach mucosa were usually ruptured and there was thrombosis in the vessels even in the submucosa. He did not think that the use of the stomach tube should be advocated in severe cases of poisoning when there was probably considerable escharotic effect in the stomach, but that sulphates should be used, since they are absolute neutralizers of carbolic acid, and harmless. Smoky urine, he said, was considered an almost invariable symptom of poisoning, but he had done 28 autopsies, in only one of which the urine present in the bladder was smoky.

Dr. J. J. McGovern said that he had had two cases of necrosis in which carbolic acid was not thoroughly in solution when used. He said alcohol was not a chemical antidote, but a solvent, dissolving the acid out of the tissues. He could see no objection to the use of the stomach tube in poisoning.

Dr. Harrington, in closing, said that carbolic acid and alcohol together

in solution, as used by Dr. Würdemann, had anesthetic without caustic effect. He could not answer with certainty as to the effect upon the antiseptic power of carbolic acid when used in the mixture with alcohol. In regard to the stomach tube, it seemed to him that where there might be danger from the tube the patient would be beyond help anyway.

Dr. H. V. Würdemann reported the case of a man with symptoms of exophthalmic goitre, who finally died of meningitis, after both eyeballs had sloughed on account of extreme protrusion. Autopsy showed a *tumor of the thyroid gland;* also a *tumor* of apparently identical structure arising from the *pituitary body.* There was a purulent meningitis which was the cause of death. In addition to these findings the liver, kidneys, heart and blood vessels showed chronic interstitial changes. Dr. Würdemann gave a complete history of the case and presented micro-photographs of the tumor tissue.

Dr. W. Becker said that the case was one of unusual interest because the pathological diagnosis of the tumor was not certain; he thought it was endothelioma. It was also interesting to speculate upon the point of entrance of the streptococcic infection, which probably traveled along the ophthalmic veins through communication with the nasal veins, which is a dangerously open channel for infection.

Dr. G. P. Barth asked if there were any symptoms whatever of acromegaly. Dr. Becker said there were none, either at autopsy or during life. Dr. J. J. McGovern did not think it certain that the case was one of exophthalmic goitre, there being so many different pathological lesions in so many different organs. Dr. Würdemann said that his object in reporting the case to the society was to show that exophthalmic goitre was not a disease, but a symptom complex. The patient suffered from many diseases, but the most prominent symptoms were exophthalmos, tachycardia, enlargement of the thyroid gland, and extreme nervousness. It was not necessary that all the classical symptoms of the disease be present in any case: Gower, in his description, said that one or two of the prominent symptoms may be absent, and the diagnosis still be justified. In answer to questions Dr. Würdemann said that patients usually recover from exophthalmic goitre or the disease becomes stationary. He thought that exhaustion was the usual cause of death. Loss of one or both eyes might occur in any case in which protrusion was so great that the lids did not cover the eyeballs. He had read nothing in literature on the concomitant involvement of the pituitary body. Dr. Harrington asked what relation the pituitary body had to the sympathetic nervous system. Dr. W. Becker said that only in pathology is any connection evident. Physiologists have nothing to offer on the subject. The angioneurotic and connective tissue systems of the body are affected by the involvement of the pituitary body, which perhaps holds growth of these systems in check. Dr. D. Hopkinson asked if these tumors might not be syphilitic. Dr. Becker said not.

Meeting of March 17, 1905.

Twenty-nine members and five visitors were present. President Coon in the chair. Two new members were elected.

The following was unanimously carried:

Resolved, That the Medical Society of Milwaukee County heartily approves of the efforts of its Tuberculosis Commission to incorporate, establish

and maintain a sanatorium for the treatment of tuberculosis in Milwaukee County, and

Resolved, That this society pledge its earnest and continued support to the accomplishment of this purpose, and

Resolved, That this society place at the disposal of its Tuberculosis Commission the sum of $100 as its subscription to this undertaking.

Dr. S. W. French read a paper upon the *Temples and Rituals of Aselepios at Epidauros and Athens*, which was illustrated by lantern slides.

Dr. Walter Kempster read a paper on *Medicine Among the Ancient Babylonians.*

Meeting of April 15, 1905

Forty-two members and two guests were present. President Coon in the chair. Eight new members were elected.

Dr. C. O. Thienhaus reported three cases, exhibiting specimens, in which there had been error or difficulty in diagnosis, and which were therefore unusually instructive. In the first a diagnosis of ovarian tumor was made: The uterus, as large as with a three months' pregnancy, was the seat of a fibroid tumor with myxomatous degeneration. The second was in a woman two months' pregnant; on examination a movable tumor, which could be pushed into the right kidney region, was found, which proved on operation to be a dermoid arising from the right ovary. The third specimen was a hard tumor, like a fibroid, which originated from the cecum; the Fallopian tubes in this case were studded apparently with tubercles.

Dr. H. V. Würdemann presented and reported a series of cases of blindness, in which operation was not indicated, and which were recovering under treatment. 1. Young man, with no history of syphilis, who complained of increasing headache and loss of vision, who on examination revealed opacities of vitreous and greatly choked discs. Treatment was instillations of dionin, pilocarpine sweats, and large doses of potassium iodide. 2. Young man who had been suffering with uveitis and had opacities in the vitreous so that the discs could not at first be seen. There was a blowing murmur at the apex, increased pulse tension, trace of albumin in the urine, but no casts. The fundus, when seen, showed evidence of nephritis. Treatment was mercury by inunction and potassium iodide later. 3. Woman suffering from glaucoma secondary to iritis. She refused operation because of successful results obtained by Dr. Knapp of New York by massage some years before. Under massage, tension has been reduced so that sight has improved. 4. Case reported of blindness suddenly occurring in one eye, due to thrombosis of retinal artery. Strong massage was used with some success, in the hope of jogging the clot sufficiently to allow some circulation. 5. Case reported of sudden total blindness occurring in a young girl. Diagnosis, hysteria. Treatment, suggestion, with flash of strong light, use of amyl nitrite, etc. Complete and immediate recovery.

Dr. G. E. Seaman said in relation to the first case that retinitis occurs without intervention of rheumatism or nephritis, for instance due to exposure of occupation which he suggested as the cause here. In regard to the second case, the fatty star of degeneration in the retina is diagnostic of nephritis unless excluded by long series of tests. In the case of glaucoma, he doubted the effect of massage and thought that iridectomy should be insisted upon.

Dr. Seaman reported a case of glaucoma in which sight was hopelessly lost under Christian Science treatment.

Dr. C. H. Lemon said that, in his experience with traumatic cases, hysterical blindness occurred in those whose eyes were below normal in some respect.

Dr. W. Becker said he thought the diagnosis of syphilis in the first case was correct. In the second case nephritis should not be doubted, and the dietetic treatment should be discussed, since medicine could accomplish nothing. In parenchymatous cases, irritants should be avoided, spices, mustard, pickles, etc. In the interstitial form, anything which raised blood-pressure, which should be determined by the sphygmomanometer, was contraindicated; salt should be restricted; meats and fats may be allowed, but only small amounts of vegetables, especially potatoes, which contain a large amount of potassium salts. Dr. L. Hopkinson seconded Dr. Becker's remarks about potassium salts, but disagreed as regards sodium salts, for under the influence of sodium and large amounts of water, the body cells more easily give up waste and the kidneys themselves are better able to eliminate. Dr. D. W. Harrington suggested that potassium iodide reduced blood pressure. Dr. Würdemann, in closing, said in regard to the first case that syphilis could not be excluded in any obscure inflammatory disease of the nervous system. In regard to albuminuric retinitis, the same appearance is seen in some cases of brain tumor. It seemed to him in this case arterial tension had been rising under potassium iodide.

Dr. A. N. Baer reported having used intravenous injections of sodium salicylate in 12 cases of rheumatism, giving in all about 50 injections, with good results. In one case erythema was caused.

Dr. W. G. Doern read a paper on *Fracture of the Hip Joint*. Dr. T. J. Maxwell, of Iowa, gave the correct principles of treatment to the profession 34 years ago, but only lately has he succeeded in getting recognition. There is no anatomical reason why firm union should not be secured. The blood supply of the upper fragment is sufficient to nourish, while the lower fragment has such good supply that abundant granulations are quickly formed. Another supposed cause for non-union, accumulation of fluid within the capsule, is untenable. Failure is due to failure to secure coaptation. Treatment: Buck's extension, leading to a pulley and weight at the foot of the bed; strip of adhesive plaster around the thigh, leading to another pulley and weight at side of bed, so arranged that traction upward and internal rotation is accomplished. Union is obtained in 4 to 6 weeks. There have now been collected 92 cases of hip joint fracture treated by this method, with no failures. Dr. Doern exhibited three specimens.

Dr. D. W. Harrington asked if two of the specimens were not impacted fractures. Dr. C. H. Lemon said that the principles of treatment enunciated were incorrect; too much mobility was allowed, so that even in impacted fractures damage might be done. He believed that some of the specimens exhibited were impacted. Dr. Doern said in closing that the adherents of this treatment were used to adverse criticism, but that demonstrations would prove its correctness. He denied that any of the specimens were of impacted fractures. Dr. A. J. Ochsner had reported 16 successful cases by the method only last week.

RACINE COUNTY MEDICAL SOCIETY.

The April meeting of the Racine County Society was held at Hotel Racine, April 6th.

The attendance was quite large and an interesting program was rendered, the paper on *Hemorrhagic Diseases of the Newly Born*, by Dr. Charles Flett, of Waterford, provoking an unusual amount of discussion.

Drs. W. R. Prouty, Henry La Hann and L. N. Hicks, Burlington; L. P. Valentine, Corliss; F. A. Malone, Waterford, and John J. Zahn, Raymond Centre, were elected to membership in the county society, all of them taking membership in the State Society also.

Dr. L. N. Hicks, of Burlington, was appointed to present Racine county's paper at the Second District meeting, to be held at Lake Geneva some time in August.

Dr. J. P. McMahon, Union Grove, was elected delegate to the State Society, with Charles Flett, Waterford, alternate.

J. P. McMahon, M. D., *Secretary.*

WAUKESHA COUNTY MEDICAL SOCIETY.

The Waukesha County Medical Society met May 6th at the office of Dr. Malone, Waukesha. Dr. H. G. B. Nixon gave a very instructive report of his visit and investigations in Cuba, describing the sanitation hospitals, and the experimental work on Malaria and Yellow Fever.

M. M. Park, M. D., *Secretary.*

FOX RIVER VALLEY MEDICAL SOCIETY.

At the regular quarterly meeting of the Fox River Valley Medical Society, which was held at Appleton on April 18, 1905, the following program was presented: *Fractures of the Extremities*, Dr. B. C. Gudden, Oshkosh; *Meningitis*, (by invitation), Prof. Frost, Madison; *Disinfection after Contagion*, Dr. C. D. Boyd, Kaukauna. Dr. S. E. Wright, Marinette; Dr. G. H. Williams, Antigo; and Dr. C. E. Johnson, Angelica, were admitted to membership.

J. S. Reeve, M. D., *Secretary.*

MILWAUKEE MEDICAL SOCIETY.

Regular Meeting, March 28, 1905.

Present, 20 members; 2 guests. President Hitz in the chair.

After giving a report on the progress of two tubercular knees which were exhibited before the society some months ago, Dr. T. L. Harrington exhibited a patient whom he had shown after severe injury to the knee joint. The knee showed considerable improvement and the patient was exhibited because of an ulcer on his upper lip. About two months ago a small tumor had appeared, from which the external surface was later lifted off, leaving a ragged ulcer. Dr. Harrington said that he had been unable to make a positive diagnosis, but that during the past few days he has strongly inclined to the belief that the trouble is syphilitic. Possible diagnoses that he had had in mind but had since relinquished were: Fibro-sarcoma, staphylococcus

infection, lupus vulgaris, and actinomycosis. Supporting the present diagnosis of gumma is the history of syphilis eighteen months ago. During the past week the change in the ulcer under mixed treatment has been marked.

Dr. Foerster, in discussion, said that the ulcer had more the appearance of tubercular syphiloderm than gumma, but that he believed it to be blastomycosis. In reviewing the differential diagnosis, he said that the improvement under potassium iodide was not conclusive of its syphilitic origin, because the treatment of blastomycosis consists in the administration of the same drug. The diagnosis of gumma he believed to be excluded by the lack of distinctive ulceration, the location, and the general condition. The rapid advance is against the diagnosis of tuberculosis. A positive diagnosis, however, is unwarranted without microscopic examination for the fungus of blastomycosis.

Dr. Gillen read a paper upon the *Significance of Glycosuria*. Glycosuria occurs when there is more than 0.2 per cent. of glucose present in the blood. Experiments of Minkowski and Von Mehring have shown that complete removal of the pancreas produces glycosuria; but that if even a small portion, connected with the circulation, is left, or a ligation of the duct of the pancreas is done, glycosuria; but that if even a small portion, connected with the circulation, is left, or a ligation of the duct of the pancreas is done, glycosuria does not result. The conclusion is that the pancreas has a double secretion. The experiments of Kaufmann and others demonstrate that injuries of the central nervous system influence the production of glycosuria, for example, division of the cord at first or second cervical vertebræ; whereas division between the sixth cervical and the fourth dorsal does not give rise to this symptom even when the pancreas is absent, warranting the conclusion that there is central control of the liver function of transformation of glycogen. Clinically, glycosuria is known to be produced by excessive carbo-hydrate diet, emotions, injury to the central nervous system, arterio-sclerosis, and disease of the pancreas. The post-mortem findings of Hansemann are that 50 per cent. of diabetics have disease of the pancreas, and that nearly 50 per cent of persons suffering from diseases of the pancreas have glycosuria. There is insufficient knowledge of glycosuria, but the pancreas is at least an important organ in producing it. The symptom is a serious one, which calls for considerable care and study in its handling. Discussion by Drs. Jermain, Fiedler and Hitz.

Dr. Stoddard presented a paper on *Stokes-Adams Disease*, of which the following is an abstract:

Our knowledge of this condition dates from the published cases of Adams (1837) and Stokes (1846), both of Dublin, though this work was practically forgotten until 1893, when Huchard's book on diseases of the heart appeared, and the condition was given its present name.

The disease, or rather, symptom-complex, is characterized by a slow pulse, accompanied by such central symptoms as pseudo-apoplexy, coma, or epileptic attacks. The etiology is variable. Some cases seem to be physiological, and Napoleon, who is known to have had a slow pulse, and to have been a subject of epilepsy, is thought now to have had the Stokes-Adams syndrome as a physiological state. Some cases occur from toxic causes, notably following the acute infectious fevers; others, and by far the larger number, result from arterio-sclerosis or cardiac changes.

Interesting among causative factors are lesions of the septum of the heart, where, apparently, the nervous control of the organ is cut off. It is thought that the vagus fibres cross in this situation, as may also the augmentors, and that the cardiac contractions left to themselves are slowed by the degeneration of the heart muscle or by toxic materials in the blood.

Dr. Stoddard's case was that of an old lady of 74, who, in addition to having attacks of pseudo-apoplexy and coma, averaging twice or three times yearly, had a chronic condition of bradycardia, when the pulse ranged as low as thirty to the minute. The case was of evident arterio-sclerotic origin.

Discussion: Dr. Madison has seen two cases during the past year. The first case was that of an old man of 72 with arterio-sclerosis. The first symptom was vertigo and he himself had noticed a slow pulse. Dr. Madison saw him eight months ago in his first serious attack when his pulse was 35, and there was vertigo. The pulse since the attack has ranged from 38 to 50. The second case was a man 37 years of age—neurotic, had had bradycardia with albuminuria. His symptoms were noticed eleven years ago. A second attack occurred eight months ago, following tonsillitis; pulse was 52 and vertigo lasted three days.

Dr. Hardy reported a possible case in a man of 70, in whom there had been vertigo, blackness before the eyes, and a pulse of 48, together with the occurrence of emphysema and an enlarged heart.

Dr. Rogers reported the case of a woman, 50 years old, who had always been in good health, who was suddenly attacked with vertigo, rapidly followed by vomiting and purging. The latter symptoms continued for one hour, while the vertigo remained for several weeks. For some time after the attack there was slowness of speech and numbness of the entire body, which is the only symptom remaining. Tinnitus aurium was marked, and Dr. Rogers suggested that there might have been a slight hemorrhage in the labyrinth.

Regular Meeting, April 11, 1905.

Present, 29 members; 2 guests. President Hitz in the chair.

Dr. D. W. Harrington exhibited a child and gave history of a case of hemiplegia. The hemiplegia had been complete and was believed by Dr. Harrington to have been due to an embolus, or hemorrhage, near the internal capsule. From the history syphilis is believed to have been the primary cause.

Dr. Shimonek reported two gall stone cases. The first was in a woman of 54 who had had abdominal pains since childhood, sometimes so severe as to require morphia. On operation two large and several small stones were found. Owing to the great enlargement, thickening, and adhesions around the cystic duct, a cholecystectomy was done. Shortly after the operation pains in the epigastrium suggested the possibility of gastric ulcer. Exploratory operation showed the stomach healthy, but greatly bound by adhesions, which were broken up. After some months the patient experienced an acute attack of hepatic colic which disappeared with the passage of a large stone, apparently of recent development. Dr. Shimonek, after reviewing the various attacks, believes them to have been separate conditions, and that the stone

was not overlooked in the original operation, but had developed in the cystic duct. Perfect recovery.

The second case had had pain for three years, and a movable mass in the abdomen was diagnosed as a movable kidney, and operation was advised, but refused. Some time later the picture changed sufficiently to cause a diagnosis of gall stone. Operation showed a distended and thickened gall bladder. Two stones were removed, one from the neck of the gall bladder, the other from the cystic duct. The right lobe of the liver was elongated to about six inches and gave rise to the difficulty in the diagnosis. This lobe of the liver was held in place by stitching the gall bladder to the upper margin of the wound. Perfect recovery.

Dr. Puls questioned the removal of the gall bladder in the first case, to which Dr. Shimonek replied that, while it might not have been necessary, no harm could result.

Dr. Walbridge said that when diseased the gall bladder should be removed, but not as routine in all gall stone cases.

Dr. Boorse reported a case of colicky pain and tenderness over the lower end of the sternum. The patient suddenly died, and post-mortem showed rupture of ventricle.

Dr. Puls reported case of papilloma of the bladder which had been operated upon five years ago, but which has since had recurrence with cystitis and hemorrhage. For the past few weeks Dr. Puls has been curetting under local anesthesia with good results.

Dr. Jermain reported a case of croupous pneumonia in a young man of 22 years. Course typical until crisis, when pain developed in both ears. Next day both drums had ruptured, and pus showed almost pure culture of the diplococcus pneumoniæ. The following day a second attack of pneumonia was inaugurated in the same lung, without crisis, and with resolution delayed for three months. Recovery was eventually perfect.

Dr. Myers reported a similar case in which 8 to 10 recurrences had taken place, each one lasting from 2 to 7 days, the entire trouble lasting 2 or 3 months. In intervals temperature would go to normal, and resolution would apparently be well advanced.

Dr. Walbridge exhibited four specimens of appendices to support the contention that, no matter how mild the course of appendicitis may appear, no one can positively say what the outcome of unoperated cases will be. First case lacked all the classical signs except that the appendix was palpable. Immediate operation disclosed a large gangrenous appendix, which ruptured on its removal. Second case was seen three days after onset, and, owing to the general improvement in the symptoms, operation was delayed until following morning. This one ruptured during the clamping. Third case was operated 18 hours after first symptom was manifested. The mucosa was already gangrenous. Fourth case had been "bilious" for some time, and was operated eight hours after occurrence of severe symptoms. Mucosa was gangrenous. Conclusions to be drawn are, that no set of symptoms is diagnostic, and that pathological findings and symptoms are not parallel. If operation is done early mortality is less than one per cent. A large amount of the pain following operation is due to manipulation by the surgeon.

Discussion by Drs. Shimonek, Puls, Rogers.

H. E. Dearholt, M. D., *Secretary.*

SOCIETY OF GERMAN PHYSICIANS AT MILWAUKEE.

At the annual meeting held March 6th, Dr. Jos. Sholdski was elected as president for the ensuing year. Dr. C. Zimmermann was re-elected as Secretary, and Dr. L. F. Frank as treasurer.

Dr. Jos. Sholdski reported a cast of *brain tumor*, with an intercurrent nasal affection, in which the ophthalmoscopic examination by Dr. C. Zimmermann had shown papillitis of both eyes.

Dr. C. Zimmermann reported another case with bilateral papillitis, but without localizing symptoms. The patient died a few days later, and the diagnosis was verified by the post-mortem examination, at which a *tumor of the cerebellum* was found.

Dr. A. J. Puls described an *operative reposition*, according to Senn's method, *of a kidney* which was displaced into the lower part of the pelvis, and spoke on several cases of cystitis and a case of recurrent papilloma of the bladder.

Dr. C. Zimmermann observed in a case of subacute iritis, in an adult, after a not unusual amount of instillations of a 1 per cent. solution of atropin, general symptoms of *atropin poisoning* with transient mydriasis of the other eye. The patient apparently had an idiosyncrasy for the drug, since only 3 drops per day caused unpleasant sensations. The maximal mydriasis, attained within the first 24 hours, was kept up by 2 drops per day in the further treatment, which resulted in perfect recovery.

At the meeting held April 1st, Dr. L. F. Frank related a case of *deep ulcers of the tragus and lobule of the ear* of a man, aged 70, with eczema of the auricle. The latter disappeared under X-rays while the former remained uninfluenced. F. desisted from further applications fearing development of carcinoma.

Dr. J. Sholdski five weeks ago saw rapid and so far lasting subsidence of asthma of several years duration, in a case of nasal polypi, after cocainization even before the polyps were removed. S. attributes this to elimination of circulatory disturbances probably brought about by a change of position of the polypi in consequence of depletion of the mucous membrane from cocainization.

Dr. A. J. Puls communicated a case of extensive ulceration of the rectum with formation of pockets, in which resection effected complete recovery. He also exhibited the uterus and a degenerated ovary removed on account of a large sarcoma of the fundus.

Dr. C. Zimmermann demonstrated the enucleated eyeball of a man who had, a few months ago, received a stab wound through the upper lid and the globe. The eye was blind from iridocyclitis and was enucleated because of pain and sympathetic irritation of the other eye which at once subsided after the operation. The upper lid was firmly adherent to the globe by a cartilaginous mass.

Dr. C. Zimmermann presented a warty tumor, 4x1.50x3 cm., removed from the ciliary border of the upper lid of a person, aged 65.

Dr. C. Reinhard spoke on a case of hematuria due to carcinoma of the bladder.

C. ZIMMERMANN, M. D., *Secretary.*